ATLANTIC COAST AND GULF OF MEXICO

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By EMORY R. JOHNSON.

This section of the report is concerned primarily with the vessels employed and the traffic carried on in the coastwise commerce of the Atlantic and Gulf seaboard. The discussion of the vessels is supplemented by an account of the men employed ashore and afloat to conduct the commerce and man the marine. To make more nearly complete the picture of the commercial activities of the ports of the Atlantic and Gulf coasts, the detailed data regarding the coastwise traffic are followed by brief tables of the foreign trade in imports and exports handled through those gateways, and of the entrances and clearances of the vessels required for the transportation of that part of our foreign commerce. And lastly, to show what the United States has done to aid the domestic and foreign trade of the Atlantic and Gulf ports, a full statement is made of the appropriations that have been granted by Congress, from the beginning up to 1907, for the improvement of the channels and harbors of each port.

The scope of this census and the extent to which comparisons may be made with previous censuses have been fully considered in the United States section of this report, and need not be further discussed. It being the general plan of the Bureau of the Census not to duplicate the work of other Government bureaus, a limited number of the tables here presented have been compiled from the annual reports of the Bureau of Navigation and the Bureau of Statistics of the Department of Commerce and Labor, and from the reports of the Chief of Engineers of the United States Army. Credit is given to the appropriate bureau or department for all data taken, and for each table compiled, from any source other than the returns made to the Bureau of the Census.

USES OF WORDS "TON" AND "TONNAGE."

In the following tables and in the discussion of them the word *tonnage* is used frequently, and of necessity with different meanings. Usually the capacity of vessels is expressed in gross tonnage; a few references, however, are made to net tonnage. It will be understood that the gross register tonnage of a vessel is obtained by dividing the number of cubic feet in the capacity of the ship by 100, since a vessel has one gross ton for each 100 cubic feet capacity. The net register tonnage is obtained by dividing by 100 the capacity in cubic feet of the space available for cargo and passengers, this space being found by deducting from the entire capacity of the ship the space occupied by machinery, by accommodations for the crew, and by certain other housings which are carefully designated by law.

Freight rates for a part of our coastwise commerce are based upon quantity units, such as barrels, bushels, and bales, and not upon the hundredweight or ton. The practice that obtains in the billing of coastwise shipments is explained by an agent of one of the largest coastwise steamship companies as follows: "Freight charges on coastwise traffic are not always based on the 100-pound basis. There are cases where the freight rates are on a per ton basis; for instance, pig iron, steel rails, and similar traffic. On pig iron, steel rails, coal, and most other commodities of like nature the freight rate per ton is based on 2,240 pounds. There are some few exceptions; for instance, in the rates on clay, where a ton of 2,000 pounds is understood to apply. There are other cases where freight rates are based on so much per package; for instance, oil in barrels, fruit and vegetables, etc. Then in the case of lumber, freight rates are based on so much per 1,000 feet. Aside from such cases as these, of course the general basis is per 100 pounds, this basis applying on almost everything which is usually classed under the head of general merchandise."

In our foreign maritime commerce the weight ton commonly used is the long ton of 2,240 pounds; although charges are frequently based upon the ton of 40 cubic feet of space. In this respect foreign maritime commerce differs from traffic upon our railroads and inland waterways, where the net ton of 2,000 pounds prevails, except in the case of shipments

of anthracite coal from the mines to the Atlantic seaboard; and differs somewhat also from the coastwise trade, where the weight ton of 2,000 pounds, as has just been stated, is sometimes employed. In order that comparisons may be made between our maritime and domestic commerce, the commerce handled coastwise has been expressed in net tons of 2,000 pounds.

AMERICAN FLEET ON THE ATLANTIC AND GULF COASTS.

The main facts regarding American vessels employed in the coastwise and foreign commerce of the Atlantic and Gulf coasts of the United States are presented in a summary form in Table 1, which includes data for the years 1889 and 1906, for all classes of craft of 5 tons net register or over.

TABLE 1.—ALL VESSELS AND CRAFT: 1906 AND 1889.

[Vessels operating as connecting links in railroad systems did not uniformly report the tonnage of freight carried or income for the year. In addition to the craft reported in this table there were 1,074 vessels, with a gross tonnage of 87,254, reported as idle in 1906, and 1,228, with a gross tonnage of 204,185, reported as idle or untraceable in 1889.]

	TOTAL.			STEAM.[1]			SAIL.[2]			UNRIGGED.		
	1906	1889[3]	Per cent of increase.	1906	1889	Per cent of increase.	1906	1889	Per cent of increase.	1906	1889	Per cent of increase.
Number of vessels	20,032	12,238	63.7	5,413	2,536	113.4	5,920	6,277	[4]5.7	8,699	3,425	154.0
Gross tonnage	4,851,421	2,658,445	82.5	1,457,894	741,770	96.5	1,132,905	1,293,192	[4]12.4	2,260,622	623,483	262.6
Value of vessels	$273,105,915	$116,042,062	135.4	$193,926,327	$65,518,640	196.0	$37,520,903	$42,685,982	[4]12.1	$41,658,685	$7,837,440	431.5
Gross income	$159,759,924	$90,147,632	77.2	$139,717,909	$57,034,216	145.0	$20,042,015	$33,113,416	[4]39.5	(5)	(5)	.....
Number of employees	77,124	[6]63,625	21.2	58,470	[5]30,528	91.5	18,654	[6]33,097	[4]43.6	(5)	(5)	.....
Wages	$38,352,259	[6]$22,123,099	73.4	$31,064,945	[6]$13,284,325	138.4	$6,687,314	[6]$8,838,774	[4]24.3	(5)	(5)	.....
Number of passengers carried	292,555,416	170,225,458	71.9	292,533,288	170,225,458	71.9	22,128	.....	.....	(5)	(5)	.....
Freight carried, including harbor work (net tons)	140,512,043	52,712,124	166.6	121,502,757	(7)	.....	19,009,286	(7)	.....	(5)	(7)	.....

[1] Includes all craft propelled by machinery.
[2] Includes schooner barges, scow schooners, etc.
[3] Includes 52 craft, with a gross tonnage of 2,553, valued at $75,360, for which no report was made for income, employees, wages, number of passengers and freight carried.
[4] Decrease.
[5] Included in statistics for steam vessels.
[6] Does not include employees or wages for yachts.
[7] Not reported separately.

DIAGRAM 1.—*Relative amount of tonnage of metal and wooden vessels: 1875 to 1906.*

[Based on data in reports of the Commissioner of Navigation which include statistics of fishing vessels, omitted by the Census.]

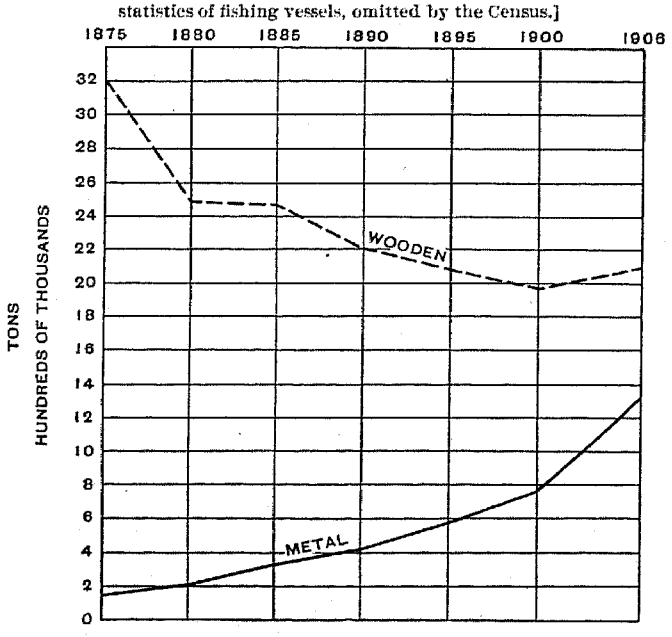
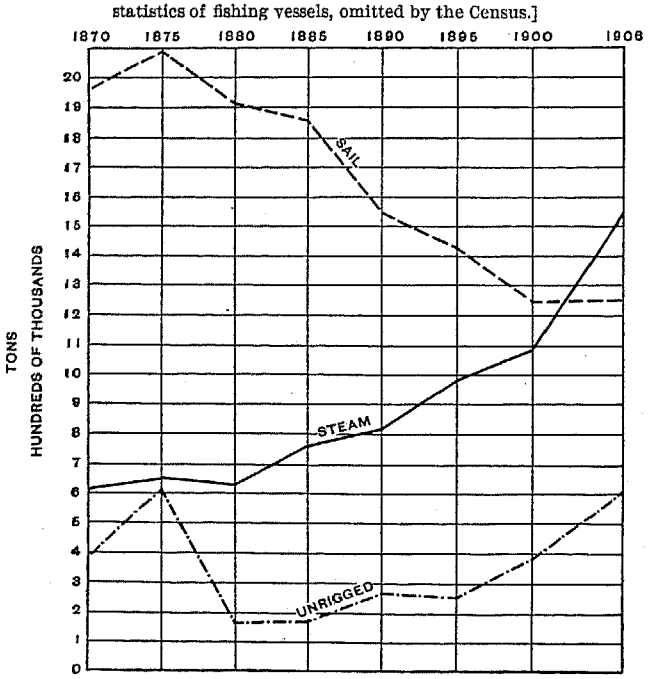


DIAGRAM 2.—*Relative amount of tonnage, steam, sail, and unrigged vessels: 1870 to 1906.*

[Based on data in reports of the Commissioner of Navigation which include statistics of fishing vessels, omitted by the Census.]



The number of sailing vessels in 1906 exceeded the number of steam craft, in spite of the fact that the number of steam vessels more than doubled between 1889 and 1906, and the number of sailing vessels decreased 5.7 per cent. Over two-fifths of the total number of vessels in operation from ports on these coasts consisted of unrigged craft, a fact that is highly significant, inasmuch as it shows the large use made of lighters in harbor work and barges in coastwise traffic. The tonnage of the unrigged craft was nearly one-half of the total gross tonnage of the entire fleet of the Atlantic and Gulf coasts.

The value of the vessels operated from the Atlantic and Gulf ports increased 135.4 per cent from 1889 to 1906; but the gain was in the steamships and unrigged craft, the most rapid growth being in the latter class of shipping. The sailing vessels were valued at 12.1 per cent less in 1906 than they were in 1889.

Most of the vessels, whether steam, sail, or unrigged craft, are still of wood construction. Less than one-fifth of the steam vessels were made of iron, steel, or "composite" construction. It is a well-known fact, however, that steel is rapidly displacing wood as material for the construction of steamships. Steel is also being used to some extent in building sailing vessels, as is shown by the reports of the Commissioner of Navigation, there having been four relatively large sailing vessels constructed of steel in 1906, and the same number in 1907.

The annual reports of the Commissioner of Navigation state the number and tonnage of all documented vessels, in order to show the progress of the merchant marine. The number and tonnage of the documented vessels of the Atlantic and Gulf coasts are shown in Table 2, for each year from 1889 to 1906.

TABLE 2.—NUMBER AND GROSS TONNAGE OF REGISTERED, ENROLLED, AND LICENSED SAIL AND STEAM VESSELS CONSTITUTING THE TOTAL MERCHANT MARINE OF THE ATLANTIC COAST AND GULF OF MEXICO, INCLUDING FISHING VESSELS: 1889 TO 1906.[1]

YEAR	TOTAL MERCHANT MARINE.						
	Total.			Sail.[2]		Steam.	
	Number of vessels.	Gross tonnage.	Annual increase in tonnage (per cent).	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	17,477	3,427,046	0.9	12,628	1,868,395	4,849	1,558,651
1905	17,357	3,396,452	4.7	12,935	1,869,091	4,422	1,527,361
1904	17,330	3,244,928	3.0	13,184	1,803,278	4,146	1,441,650
1903	17,218	3,149,711	5.7	13,305	1,767,003	3,913	1,382,708
1902	17,040	2,978,876	4.5	13,332	1,710,835	3,708	1,268,041
1901	16,744	2,849,342	4.4	13,200	1,674,030	3,544	1,175,312
1900	16,532	2,727,892	4.3	13,170	1,640,260	3,362	1,087,632
1899	16,275	2,614,869	2.4	13,028	1,592,174	3,247	1,022,695
1898	16,442	2,553,739	[4]3.6	13,256	1,580,479	3,186	973,260
1897	16,592	2,647,796	[4]0.7	13,419	1,636,694	3,173	1,011,102
1896	16,786	2,667,314	[4]0.5	13,612	1,656,445	3,174	1,010,869
1895	17,136	2,679,779	[4]1.2	13,972	1,699,717	3,164	980,062
1894	17,468	2,712,944	[4]3.4	14,342	1,754,102	3,126	958,842
1893	17,913	2,807,690	6.1	14,800	1,853,436	3,113	954,254
1892	17,891	2,805,916	0.9	14,852	1,904,029	3,039	901,887
1891	17,564	2,780,683	5.4	14,629	1,894,308	2,935	886,375
1890	17,332	2,638,596	1.5	14,532	1,821,488	2,800	817,108
1889	17,572	2,599,504	.....	14,743	1,800,595	2,829	798,909

YEAR.	ENROLLED AND LICENSED VESSELS, UNDER 20 TONS.							REGISTERED VESSELS.						
	Total.			Sail.[2]		Steam.		Total.			Sail.[3]		Steam.	
	Number of vessels.	Gross tonnage.	Annual increase in tonnage (per cent).	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Annual increase in tonnage (per cent).	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	16,912	2,823,909	2.2	12,216	1,691,506	4,696	1,132,403	565	603,137	[4]4.7	412	176,889	153	426,248
1905	16,763	2,763,866	3.4	12,500	1,670,105	4,263	1,093,761	594	632,586	10.6	435	198,986	159	433,600
1904	16,756	2,672,794	3.2	12,764	1,619,438	3,992	1,053,356	574	572,134	2.4	420	183,840	154	388,294
1903	16,603	2,591,118	6.2	12,850	1,571,074	3,753	1,020,044	615	558,593	3.5	455	195,929	160	362,664
1902	16,332	2,439,415	7.4	12,774	1,465,338	3,558	974,077	708	539,461	[4]6.7	558	245,497	150	293,964
1901	15,938	2,270,938	3.7	12,557	1,370,025	3,381	900,913	806	578,404	7.6	643	304,005	163	274,399
1900	15,742	2,190,552	6.5	12,516	1,323,958	3,226	866,594	790	537,340	[4]3.6	654	316,302	136	221,038
1899	15,488	2,057,485	[4]0.4	12,378	1,262,521	3,110	794,964	787	557,384	14.2	650	329,653	137	227,731
1898	15,770	2,065,611	1.5	12,693	1,277,946	3,077	787,665	672	488,128	[4]20.4	563	302,533	109	185,595
1897	15,739	2,034,886	0.9	12,678	1,219,752	3,061	815,134	853	612,910	[4]5.9	741	416,942	112	195,968
1896	15,905	2,016,020	[4]0.8	12,846	1,209,682	3,059	806,338	881	651,294	0.8	766	446,763	115	204,531
1895	16,247	2,033,367	1.3	13,190	1,240,148	3,057	793,219	889	646,412	[4]8.4	782	459,569	107	186,843
1894	16,501	2,007,588	[4]4.5	13,488	1,249,837	3,013	757,751	967	705,356	(5)	854	504,264	113	201,092
1893	16,928	2,102,269	3.9	13,933	1,338,368	2,995	763,901	985	705,421	[4]9.8	867	515,068	118	190,353
1892	16,747	2,024,182	1.3	13,814	1,279,177	2,933	745,005	1,144	781,734	(5)	1,038	624,852	106	156,882
1891	16,397	1,999,028	4.3	13,575	1,276,588	2,822	722,440	1,167	781,655	8.3	1,054	617,721	113	163,934
1890	16,214	1,917,041	7.3	13,504	1,226,208	2,710	690,833	1,118	721,555	[4]11.3	1,028	595,279	90	126,276
1889	16,261	1,786,065	.....	13,522	1,112,649	2,739	673,416	1,311	813,439	.....	1,221	687,946	90	125,493

[1] From the reports of the Commissioner of Navigation, Department of Commerce and Labor.
[2] Including canal boats and barges.
[3] Including barges.
[4] Decrease.
[5] Less than one-tenth of 1 per cent.

The census data include various classes of vessels, particularly undocumented craft, not comprised in the compilation made by the Bureau of Navigation.[1] The table taken from the report of the Commissioner of Navigation shows that the progress of the marine of the Atlantic and Gulf coasts was seriously checked from 1894 to 1898 by the business depression during those years. The lowest tonnage for the eighteen-year period was reported for 1898, and it was not until 1900 that the position reached in 1894 had been regained. As a rule, the progress since 1900 has been more rapid than during any other part of the eighteen-year period.

It is hardly necessary to state that the increase in tonnage has been mainly in steamships, and that there has been very little growth in the tonnage of sailing vessels. Indeed, sailing vessels were fewer in number and less in total tonnage in 1906 than in 1892, the year in which they reached their maximum. The progress of the merchant marine of the Atlantic and Gulf coasts has been in the vessels employed in domestic commerce—that is, in the enrolled and licensed tonnage. The vessels engaged in foreign trade—the registered vessels—numbered 1,311 and had a gross tonnage of 813,439 in 1889; in 1906 the number of such vessels was 565 and the tonnage 603,137. The lowest figure for registered tonnage was reached in 1898, when the total was only 488,128. The tonnage of steamers engaged in the foreign trade increased from 125,493 in 1889 to 426,248 in 1906, while the registered tonnage of sailing vessels fell from 687,946 to 176,889. The Census reports show that 489 American vessels, with a gross tonnage of 538,082 and a value of $52,329,924, carried freight between our Atlantic and Gulf coasts and foreign countries during the year 1906.

In Table 3 the vessels in the fleet of the Atlantic and Gulf coasts are classified with reference to their services.

[1] See United States section of this report, page 6.

TABLE 3.—ALL VESSELS AND CRAFT, BY OCCUPATION, AND PER CENT IN EACH GROUP: 1906.

OCCUPATION.	VESSELS.		TONNAGE.		VALUE OF VESSELS.		GROSS INCOME.		EMPLOYEES.		WAGES.	
	Number.	Per cent.	Gross tons.	Per cent.	Amount.	Per cent.	Amount.	Per cent.	Number.	Per cent.	Amount.	Per cent.
Total	20,032	100.0	4,851,421	100.0	$273,105,915	100.0	$159,759,924	100.0	77,124	100.0	$38,352,259	100.0
Commercial vessels	16,409	81.9	4,724,160	97.4	241,874,036	88.6	157,396,518	98.5	68,297	88.6	34,647,943	90.3
Freight and passenger	5,750	28.7	2,151,712	44.4	154,350,334	56.5	92,096,988	57.6	41,551	53.9	17,789,511	46.4
Ferryboats	270	1.3	162,834	3.4	19,970,466	7.3	10,571,534	6.6	2,388	3.1	2,098,540	5.5
Tugs and other towing vessels	1,690	8.4	148,992	3.1	25,894,551	9.5	30,454,574	19.1	11,276	14.6	7,528,564	19.6
Unrigged craft	8,699	43.4	2,260,622	46.6	41,658,685	15.3	24,273,422	15.2	13,082	17.0	7,231,328	18.9
Yachts	2,935	14.7	91,507	1.9	25,066,082	9.2	18,721	(1)	6,923	9.0	2,541,310	6.6
All other	688	3.4	35,754	0.7	6,165,797	2.3	2,344,685	1.5	1,904	2.5	1,163,006	3.0

[1] Less than one-tenth of 1 per cent.

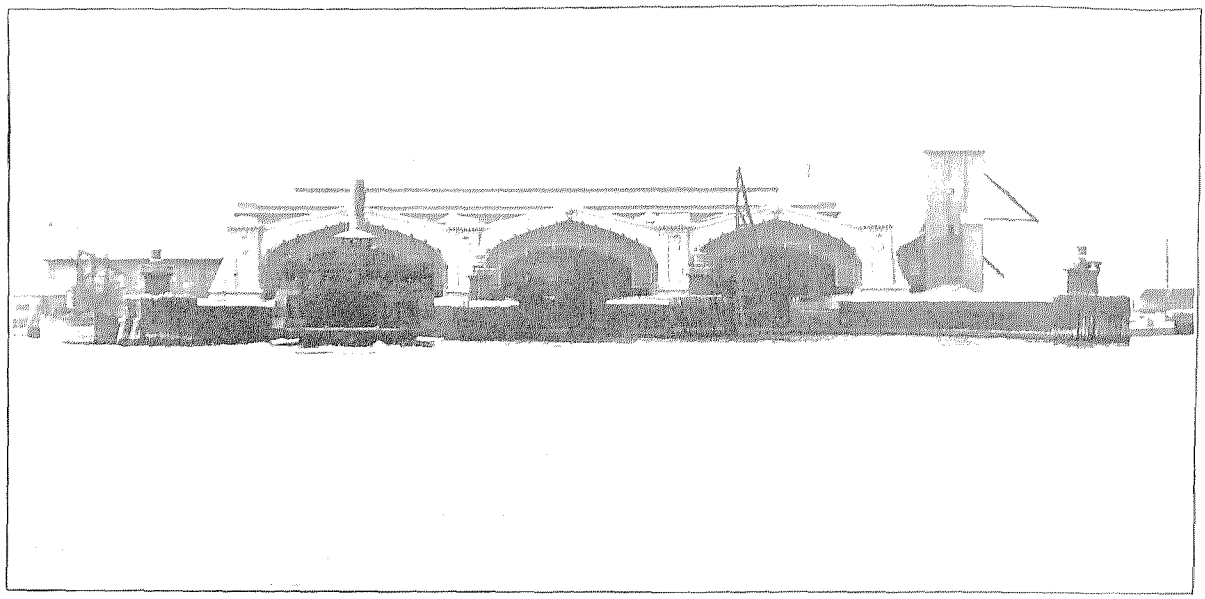
Probably the most significant economic fact shown is the extensive use of the unrigged craft, which constituted over one-half of the total number of commercial vessels and comprised nearly one-half of the entire tonnage of these vessels. Inasmuch as most tugs are employed a larger part of the time in towing unrigged craft, the totals for the two classes of vessels may be taken as representing the craft used in barge traffic and in lighterage work. The tugs and unrigged craft together constitute over one-half of all the vessels of the fleet of the Atlantic and Gulf coasts, and their tonnage makes up nearly one-half of the total tonnage of the fleet. Although they comprise less than one-fourth of the total value of the fleet, their earnings amounted to over one-third of the total gross income. The importance of ferriage at the Atlantic and Gulf ports is also shown by the table. The number and value of yachts are likewise significant, the use of such vessels being for the purposes of business and pleasure.

About two-fifths of the 20,032 vessels of all classes of 5 tons or over operated on the Atlantic and Gulf coasts consisted of undocumented craft.

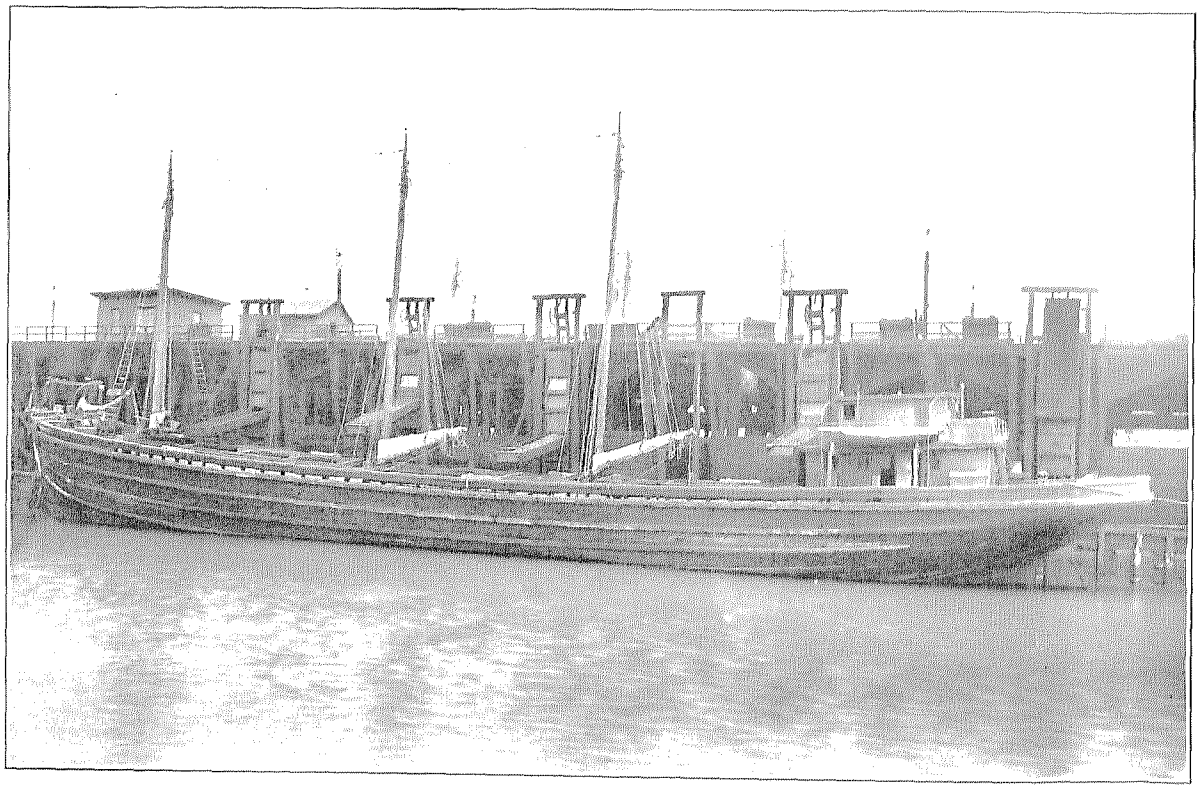
TABLE 4.—*Number and gross tonnage of active and idle undocumented craft: 1906.*

CLASS.	Number of vessels.	Gross tonnage.
Total	8,065	1,831,023
Active	7,880	1,813,052
Steam	659	28,042
Sail	404	3,783
Unrigged	6,817	1,781,227
Idle	185	17,971
Steam	71	5,003
Sail	27	248
Unrigged	87	12,720

The gross tonnage of this undocumented shipping amounted to 1,831,023, all but 37,076 tons of which was credited to the unrigged craft, consisting mainly of barges and lighters. All but a small portion of this large tonnage was in use in 1906, during which year the shipping business was regularly active.



MUNICIPAL FERRY TERMINAL, ST. GEORGE, STATEN ISLAND, N. Y.



BARGE PHOENIX OF THE PHILADELPHIA AND READING COAL AND IRON COMPANY'S FLEET.

Tables 5 to 10 give the details regarding each of the different classes of vessels included in the fleet of the Atlantic and Gulf coasts. The steam vessels of this fleet numbered 5,413, with a gross tonnage of nearly 1,500,000, and their value approximated $200,000,000. The steamships used in the transportation of freight and passengers comprised only 28.1 per cent of the total, the towing vessels and also the yachts outnumbering the freight and passenger steamers.

TABLE 5.—*Steam vessels, by occupation, with per cent each class is of total: 1906.*

OCCUPATION.	Number of vessels.	Per cent.	Gross tonnage.	Per cent.	Value of vessels.	Per cent.
Total	5,413	100.0	1,457,894	100.0	$193,926,327	100.0
Freight and passenger	1,523	28.1	1,045,811	71.7	121,136,485	62.5
Tugs and other towing vessels	1,690	31.2	148,992	10.2	25,894,551	13.4
Ferryboats	270	5.0	162,834	11.2	19,970,466	10.3
Yachts	1,577	29.1	70,461	4.8	21,290,339	11.0
All other	353	6.5	29,796	2.0	5,634,486	2.9

As would be expected, the freight and passenger steamers were on an average much larger than the other classes of steam craft, the gross tonnage of the steamships employed in the freight and passenger service being 71.7 per cent of the total gross tonnage of the entire fleet. Their value was 62.5 per cent of the total.

A small number of canal boats is included among the unrigged craft of the Atlantic and Gulf coasts. It is natural, however, that the larger part of the canal boats should be included among the vessels employed upon the inland waterways of the United States, the unrigged craft of the Atlantic and Gulf coasts being mainly the barges and lighters built for operation on salt water.

TABLE 6.—*Unrigged vessels, by occupation, with per cent each class is of total: 1906.*

OCCUPATION.	Number of vessels.	Per cent.	Gross tonnage.	Per cent.	Value of vessels.	Per cent.
Total	8,699	100.0	2,260,622	100.0	$41,658,685	100.0
Canal boats	663	7.6	103,877	4.6	1,112,475	2.7
All other	8,036	92.4	2,156,745	95.4	40,546,210	97.3

The sailing vessels of the Atlantic and Gulf coasts outnumbered the steamers but comprised a smaller gross tonnage, while their value was only 19.3 per cent of the value of the steamships. As would be expected, a large number of yachts are included with the sailing vessels; they constituted 22.9 per cent of the total, as is shown in Table 7. While their gross tonnage was small, forming only 1.9 per cent of the total, their value was relatively high, being 10.1 per cent of the total.

TABLE 7.—*Sail vessels, by occupation, with per cent each class is of total: 1906.*

OCCUPATION.	Number of vessels.	Per cent.	Gross tonnage.	Per cent.	Value of vessels.	Per cent.
Total	5,920	100.0	1,132,905	100.0	$37,520,903	100.0
Freight and passenger	4,227	71.4	1,105,901	97.6	33,213,849	88.5
Yachts	1,358	22.9	21,046	1.9	3,775,743	10.1
All other	335	5.7	5,958	0.5	531,311	1.4

The figures for sailing vessels include schooner barges, which are craft usually towed, but equipped with schooner-rigged masts, so that they may be able to take care of themselves in case they break adrift from the tugs towing them.[1] Of the 515 vessels classified as schooner barges, in the United States as a whole, 389 were on the Atlantic and Gulf coasts, and their tonnage was nearly two-thirds of the total gross tonnage of all such vessels in the United States. These schooner barges are used extensively in the coastwise transportation of coal. The practice still continues of converting old sailing vessels into schooner barges, but the plan is also followed of constructing new schooner barges either with wood or steel hulls.

TABLE 8.—*Schooner barges: 1906.*

Number of vessels	389
Gross tonnage	323,618
Value of vessels	$7,497,833
Number of employees	1,458
Wages	$721,911

FERRYBOATS.

Details regarding the ferryboats used at and about the ports of the Atlantic coast and the Gulf of Mexico are shown in Table 9.

[1] See United States section of this report, page 10.

TABLE 9.—FERRYBOATS, BY DISTRICTS, WITH PER CENT IN EACH DISTRICT: 1906.

DISTRICT.	Number of vessels.	Gross tonnage.	Value of vessels.	Gross income.	Number of employees.	Wages.	Number of passengers carried.
Total	270	162,834	$19,970,466	$10,571,534	2,388	$2,098,540	272,596,670
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
New York	152	129,690	17,098,677	8,423,119	1,622	1,578,839	208,684,123
Per cent of total	56.3	79.6	85.6	79.7	67.9	75.2	76.6
Philadelphia	25	10,306	918,867	1,009,295	217	195,560	30,616,853
Per cent of total	9.3	6.3	4.6	9.5	9.1	9.3	11.2
All other districts	93	22,838	1,952,922	1,139,120	549	324,141	33,295,694
Per cent of total	34.4	14.0	9.8	10.8	23.0	15.4	12.2

The 270 ferryboats in use in 1906 had a total value of nearly $20,000,000, and their gross income was $10,500,000. Almost three-fifths of these boats were used in the waterways about New York city. The ferry service on the Delaware river between Philadelphia and Camden required only one-sixth as many boats as were needed at New York city. Moreover, the ferryboats in operation about New York city were above the average in size and greatly exceeded the average in value. The ferryboats used at New York and Philadelphia numbered 177, while there were 93 employed at all the other ports on the Atlantic and Gulf coasts. In addition to these, 11 ferries were operated on the Mississippi river at New Orleans, and the statistics for them are included in the section on the Mississippi river and its tributaries. The figures for ferryboats do not include car floats moved about harbors by tugs.

The number of passengers carried on ferryboats would naturally be large; indeed the 272,596,670 passengers reported for the ferry traffic formed 93.2 per cent of the total number of passengers carried on all vessels of the fleet of the Atlantic and Gulf coasts. Moreover, the ferryboat traffic on the Atlantic and Gulf coasts was credited with 74.3 per cent of the total number of passengers carried on all kinds of vessels in the entire United States. Over one-half (56.9 per cent) of all the passengers carried in the United States was reported for the ferry traffic on the waters about New York city; and, although New York is the great center of American coastwise traffic, the number of ferry passengers at that port is many times the number of other passengers. At Philadelphia, the next most important center of the ferry traffic on the Atlantic coast, about 30,000,000 passengers were carried, as contrasted with over 208,000,000 at New York and with about 33,000,000 in all other districts of the Atlantic and Gulf coasts.

The increase in the tonnage and traffic of ferryboats from 1889 to 1906 is shown in Table 10.

TABLE 10.—*Ferryboats, with per cent of increase: 1906 and 1889.*

	1906	1889	Per cent of increase.
Number of vessels	270	214	26.2
Gross tonnage	162,834	98,174	65.9
Value of vessels	$19,970,466	$7,907,700	152.5
Gross income	$10,571,534	$5,392,969	96.0
Passengers	$7,386,913	(1)	.....
All other sources	$3,184,621	(1)	.....
Number of employees	2,388	1,710	39.6
Wages	$2,098,540	$1,276,847	64.4
Number of passengers carried	272,596,670	158,644,012	71.8

[1] Not reported separately.

It will be noted that the ferryboats now being built are larger than their predecessors, since there was a gain of 26.2 per cent in the number of ferry vessels, and that increase accounted for a growth of about 66 per cent in the gross tonnage. The rise in value is even more striking, the gain having been 152.5 per cent. The income from ferry traffic about doubled, and the number of passengers carried increased 71.8 per cent.

The extent to which ferries were operated by municipal governments is shown in Table 11.

TABLE 11.—MUNICIPAL FERRIES: 1906.

DISTRICT.	Number of vessels.	Gross tonnage.	Value of vessels.	GROSS INCOME.		Number of employees.	Wages.	Number of passengers carried.
				Passengers.	All other sources.			
Total	25	19,337	$2,466,447	$620,780	$263,172	264	$433,029	19,784,055
New York harbor	16	14,829	2,253,000	557,437	220,905	188	360,159	12,521,847
Boston harbor	7	4,448	209,347	62,373	41,037	72	70,720	7,242,808
Small points on Connecticut river	2	60	4,100	970	1,230	4	2,150	19,400

At the ports of the Atlantic coast and Gulf of Mexico there were 25 municipal ferryboats out of a total of 29 for the entire country. Sixteen of the 25 were at New York; 7, at Boston; and 2, on the Connecticut river. New York and Boston are the only cities on the Atlantic and Gulf coasts that have found it necessary or desirable to operate ferryboats. Of the 16 municipal ferries reported for New York harbor, 7 were used in connection with the management of penal or charitable institutions. The number of passengers carried on the New York municipal ferries was relatively small. These 16 municipal ferryboats operated in 1906 were but 10.5 per cent of the total of 152 ferryboats in use at New York, and the 12,521,847 passengers which they carried comprised only 6 per cent of the total ferry traffic of New York harbor. This condition is probably explained by the fact that municipal ferries are developing new services which may be expected to increase with the consequent redistribution of population.

RAILWAY SHIPPING.

Information regarding the vessels used by steam railroads is presented in Table 12.

TABLE 12.—*Craft operated in connection with steam railroads: 1906.*

	Total.	Steam.	Unrigged.
Number of vessels	1,324	206	1,118
Gross tonnage	472,917	34,664	438,253
Value of vessels	$12,436,261	$4,670,207	$7,766,054
Number of employees	3,582	2,147	1,435
Wages	$2,493,845	$1,554,433	$939,412
Number of passengers carried	697,127	597,127	100,000

Of the total number of craft thus employed on the Atlantic coast and Gulf of Mexico, 206 were operated by their own engines, and 1,118 were unrigged craft. This shipping operated in connection with steam railroads includes the "craft engaged in the transportation of freight and passengers, or freight and passenger cars as connecting links in railway systems exclusively, freight vessels operated for the purpose of extending freight business from railroad terminals to adjacent ports without additional charge, vessels used in connection with construction work for railroad companies, and craft owned by the companies and engaged in lightering the freight incident to the operation of the road." [1] The figures in Table 12 do not include vessels operated by railroad companies as regular freight and passenger lines, or the enormous railroad ferry traffic at New York and Philadelphia. Nine-tenths of the 1,464 vessels operated in 1906 in connection with steam railroads in the entire United States were used on the Atlantic and Gulf coasts.

GOVERNMENT VESSELS.

While this report does not include the statistics of vessels owned by the United States Government, it contains the facts regarding the vessels owned and operated by state and city governments.

TABLE 13.—*Vessels owned and operated by state and city governments: 1906.*

	Total.	Steam.	Sail.	Unrigged.
Number of vessels	213	104	3	106
Gross tonnage	46,204	31,228	78	14,958
Value of vessels	$6,169,775	$5,470,075	$6,380	$692,420
Gross income	[1] $2,924,807	$1,131,594	.....	[1] $1,793,213
Number of employees	1,309	830	8	522
Wages	$1,632,858	$1,008,090	$5,280	$619,488
Number of passengers carried	20,183,209	20,183,209	.....	.....

[1] Includes value of work done by craft of the Department of Docks and Ferries, New York city.

Table 13 includes "municipal ferryboats, fire boats, police patrol boats, oyster patrol boats, scavenger and garbage boats, quarantine boats, ambulance boats, boats for the protection of fish and game, canal inspection and repair boats, dredges and dredge tenders, steam derricks, pilot boats, pile drivers, ice boats, ice breakers, boats used for scientific investigation, and those used in connection with eleemosynary institutions." [1] State and city governments in the United States owned 315 such vessels, over two-thirds of which were operated at the ports on the Atlantic coast and Gulf of Mexico. The largest municipal owner of vessels was New York city, which not only had the municipal ferries already described, but also had a considerable number of craft that was used by its important Department of Docks and Ferries.

[1] See United States section of this report, page 13.

FISHING CRAFT.

For the purpose of making a complete statement of the American fishing fleet operated from the ports of the Atlantic and Gulf coasts, Table 14 is included.

TABLE 14.—*Vessels engaged in the commercial fisheries of the Atlantic coast and Gulf of Mexico, and the persons employed thereon: 1902 and 1904.*[1]

	Atlantic coast and Gulf of Mexico: 1902 and 1904.
Fishing vessels:	
Number	4,631
Tonnage (net)	86,076
Value	$7,813,776
Value of outfit	$3,088,728
Transporting vessels:	
Number	1,671
Tonnage (net)	29,968
Value	$1,795,119
Value of outfit	$278,235
Persons employed:	
On fishing vessels	29,663
On transporting vessels	5,166

[1] Compiled from the reports of the Bureau of Fisheries.

The table was compiled from the reports of the Bureau of Fisheries, and inasmuch as all the figures could not be taken from one report the different items do not cover the same years; nevertheless the table indicates with practical accuracy the status of the Atlantic and Gulf fishing fleet.

The annual reports of the Commissioner of Navigation give the tonnage employed in the whale fisheries and in the cod and mackerel fisheries of the United States for every year from 1793 to the present. The figures published by the Commissioner of Navigation do not necessarily agree with those taken from the reports of the Bureau of Fisheries, for the reason that the periods covered are not identical. Moreover, the fleet employed in the whale, cod, and mackerel fisheries does not include all the vessels engaged in the commercial fisheries conducted from the ports of the United States.

In the American whaling fleet a decline continued unchecked from the close of the Civil War until 1902, when the lowest ebb was reached. From 9,320 in that year the tonnage rose to 11,020 in 1906. In the cod and mackerel fleet there was a decline which, with the exception of short periods of increase in the early seventies and in 1883, was continuous to 1899, when the tonnage was 50,679. In 1906 the tonnage was 61,439 for the United States as a whole. The cod and mackerel fleet operated from the Atlantic and Gulf ports in 1906 comprised 1,503 vessels, with a tonnage of 57,699.[2]

[2] From the report of the Commissioner of Navigation, Department of Commerce and Labor, 1906.

OWNERSHIP OF VESSELS.

The ownership of vessels is considered in three tables—15, 16, and 17. In Table 15 the number, tonnage, and value of steamships and sailing vessels are considered, the situation in 1906 being compared with that in 1889. The figures do not include unrigged craft.

TABLE 15.—OWNERSHIP FOR STEAM AND SAIL VESSELS: 1906 AND 1889.

CLASS AND OWNERSHIP.	VESSELS.				TONNAGE.				VALUE OF VESSELS.			
	Number.		Per cent of total.		Gross tons.		Per cent of total.		Amount.		Per cent of total.	
	1906	1889	1906	1889	1906	1889	1906	1889	1906	1889	1906	1889
Total	11,333	8,813	100.0	100.0	2,590,799	2,034,962	100.0	100.0	$231,447,230	$108,204,622	100.0	100.0
Incorporated company	2,630	1,019	23.2	11.6	1,644,044	571,181	63.5	28.1	167,929,716	43,370,790	72.6	40.1
All other forms of ownership	8,703	7,794	76.8	88.4	946,755	1,463,781	36.5	71.9	63,517,514	64,827,832	27.4	59.9
Steam	5,413	2,536	100.0	100.0	1,457,894	741,770	100.0	100.0	193,926,327	65,518,640	100.0	100.0
Incorporated company	2,072	917	38.3	36.2	1,244,283	545,683	85.3	73.6	155,819,420	42,892,910	80.3	65.5
All other forms of ownership	3,341	1,619	61.7	63.8	213,611	196,087	14.7	26.4	38,106,907	22,625,730	19.7	34.5
Sail	5,920	6,277	100.0	100.0	1,132,905	1,293,192	100.0	100.0	37,520,903	42,685,982	100.0	100.0
Incorporated company	558	102	9.4	1.6	399,761	25,498	35.3	2.0	12,110,296	483,880	32.3	1.1
All other forms of ownership	5,362	6,175	90.6	98.4	733,144	1,267,694	64.7	98.0	25,410,607	42,202,102	67.7	98.9

The table illustrates in a striking manner the rapid substitution of corporate ownership for the partnership and individual forms of ownership. The gross tonnage of steamers and sailing vessels owned by corporations was nearly three times as great in 1906 as it was in 1889, during which period the tonnage of similar vessels owned by nonincorporated firms and by individuals decreased 35.3 per cent. The figures for value illustrate the same fact with even greater force. In 1889 the value of steamships and sailing vessels owned by corporations amounted to two-fifths of the total, whereas in 1906 the value of the vessels belonging to corporations was nearly three-fourths of the total.

The fact that the ownership of both classes of vessels—sailing vessels as well as steamers—is passing to the corporations is shown very clearly in Table 15. The figures for both the tonnage and the value of the steamers possessed by the corporations greatly exceed the figures for the steam vessels otherwise owned. The average size of the steamers belonging to the corporations is greatly in excess of that for the steamships owned by individuals and firms. In 1906 the 2,072 corporately owned steamers had an average gross tonnage of 601, while the 3,341 steamships not belonging to corporations had an average gross tonnage of only 64. The same condition is true of sailing vessels corporately and otherwise owned, as is shown by the fact that the 558 vessels belonging to corporations in 1906 had a tonnage more than one-half that of the 5,362 sailing vessels otherwise owned. In 1889 only 1.1 per cent of the total value of the sailing vessels of the Atlantic and Gulf coasts was the property of corporations, whereas in 1906, 32.3 per cent of the value was credited to the corporations. In shipping as well as in domestic industry the unmistakable tendency is toward the increased control of property by corporations.

A more detailed analysis of the ownership of the entire fleet of the Atlantic and Gulf coasts, including steamers, sailing vessels, and unrigged craft, is made in Table 16, where the extent of individual, partnership, and corporate ownership in 1906 is indicated.

TABLE 16.—*Number, gross tonnage, and value of vessels, by character of ownership, with per cent in each class: 1906.*

OWNERSHIP.	VESSELS.		TONNAGE.		VALUE OF VESSELS.	
	Number.	Per cent.	Gross tons.	Per cent.	Amount.	Per cent.
Total	20,032	100.0	4,851,421	100.0	$273,105,915	100.0
Individual	8,517	42.5	844,064	17.4	45,457,935	16.6
Firm	2,849	14.2	666,005	13.7	19,636,772	7.2
Incorporated company	8,341	41.6	3,246,215	66.9	199,516,774	73.1
Miscellaneous	325	1.6	95,137	2.0	8,494,434	3.1

The corporations possessed somewhat over two-fifths of the total number of craft, but the tonnage of the corporately owned shipping formed two-thirds of the total, and its value was nearly three-fourths of the aggregate. In number, tonnage, and value the individually owned craft exceeded those possessed by firms.

CLASSIFICATION OF VESSELS BY OCCUPATION OR USE.

By analyzing the shipping of the Atlantic and Gulf coasts with reference to ownership and occupation, as is done in Table 17, the character of the fleet and the services performed are indicated.

TABLE 17.—NUMBER AND GROSS TONNAGE OF VESSELS, BY CHARACTER OF OWNERSHIP AND BY CLASS AND OCCUPATION: 1906.

CLASS AND OCCUPATION.	TOTAL.		INDIVIDUAL.		FIRM.		INCORPORATED COMPANY.		MISCELLANEOUS.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
Total	20,032	4,851,421	8,517	844,064	2,849	666,005	8,341	3,246,215	325	95,137
Steam	5,413	1,457,894	2,625	130,963	580	48,015	2,072	1,244,283	136	34,633
Freight and passenger	1,523	1,045,811	492	37,838	170	27,528	845	977,868	16	2,577
Tugs and other towing vessels	1,090	148,992	455	20,236	300	17,407	911	107,183	24	4,166
Ferryboats	270	162,834	25	1,874	4	199	216	141,424	25	19,337
Yachts	1,577	70,461	1,463	67,540	74	1,717	36	1,133	4	71
All other	353	29,796	190	3,475	32	1,164	64	16,675	67	8,482
Sail	5,920	1,132,905	4,091	338,536	1,189	349,135	558	399,761	82	45,473
Freight and passenger	4,227	1,105,901	2,552	315,669	1,082	347,648	542	398,702	51	43,882
Yachts	1,358	21,046	1,269	20,038	75	754	8	150	6	104
All other	335	5,958	270	2,829	32	733	8	909	25	1,487
Unrigged	8,699	2,260,622	1,801	374,565	1,080	268,855	5,711	1,602,171	107	15,031

Besides stating the total number and the gross tonnage of the steam, sail, and unrigged craft, and subdividing the steamships and sailing vessels into their different classes, according to character of service, the table shows similar data for the vessels owned by individuals, by firms, and by corporations. It will be noted that over one-half of the tonnage of individually owned steamships is credited to yachts, and that the proportion of the tonnage of steamships owned by individuals and used either in the freight and passenger services or in the towing business is small compared with the proportion which the tonnage of all vessels of similar use forms of the total tonnage. On the other hand, nearly all of the relatively small tonnage of steamers belonging to firms is credited to freight and passenger, and towing vessels. The tonnage of steamers owned by corporations was devoted mainly to the transportation of freight and passengers; at the same time the corporately owned tugs and ferryboats far exceeded in tonnage such vessels possessed by individuals and firms. Sailing vessels, however owned, were used mainly in the freight and passenger services. The only other important subclass of sailing vessels is the yacht, the ownership of which would, in most cases, naturally be individual. This table, like the preceding ones, shows the preponderance of the unrigged craft over steamers and over sailing vessels as regards total tonnage.

CONSTRUCTION.

The classification of the shipping of the Atlantic coast and Gulf of Mexico with reference to material of construction is shown for 1889 and for 1906 in Table 18.

TABLE 18.—NUMBER, GROSS TONNAGE, AND VALUE OF VESSELS, BY CHARACTER OF CONSTRUCTION AND BY CLASS AND OCCUPATION: 1906 AND 1889.

CLASS AND OCCUPATION.	Census.	TOTAL.			IRON AND STEEL.			WOOD.			COMPOSITE.		
		Number of vessels.	Gross tonnage.	Value of vessels.	Number of vessels.	Gross tonnage.	Value of vessels.	Number of vessels.	Gross tonnage.	Value of vessels.	Number of vessels.	Gross tonnage.	Value of vessels.
Total	1906	20,032	4,851,421	$273,105,915	1,148	1,247,838	$155,776,134	18,827	3,591,278	$115,877,581	57	12,305	$1,452,200
	1889	12,238	2,658,445	116,042,062	434	364,283	33,622,030	11,714	2,269,558	81,236,912	90	24,604	1,183,120
Steam	1906	5,413	1,457,894	193,926,327	993	1,086,446	147,640,277	4,388	365,616	45,280,050	32	5,832	1,006,000
	1889	2,530	741,770	65,518,640	421	355,065	32,897,230	2,091	381,340	32,073,610	24	5,365	547,800
Freight and passenger	1906	1,523	1,045,811	121,136,485	395	849,069	104,382,729	1,123	193,987	16,563,756	5	2,755	190,000
	1889	810	487,939	36,989,280	188	254,457	21,720,810	612	229,165	14,988,470	10	4,317	280,000
Tugs and other towing vessels	1906	1,090	148,992	25,894,551	323	70,134	12,055,761	1,363	78,582	13,808,790	4	276	30,000
	1889	1,095	61,359	10,203,330	103	8,588	1,626,800	986	52,535	8,554,730	6	236	21,800
Ferryboats	1906	270	162,834	19,970,466	127	114,498	15,971,767	143	48,336	3,998,699	----	----	----
	1889	214	98,174	7,907,700	59	40,510	3,936,500	155	57,664	3,971,200	----	----	----
Yachts	1906	1,577	70,461	21,290,339	107	36,369	11,807,070	1,449	31,944	8,797,269	21	2,148	686,000
	1889	170	11,328	3,520,610	25	4,864	1,649,720	142	6,111	1,735,890	3	353	135,000
All other	1906	353	29,796	5,634,486	41	16,376	3,422,950	310	12,767	2,111,536	2	653	100,000
	1889	247	82,970	6,897,720	46	46,646	3,963,400	196	35,865	2,823,320	5	459	111,000
Sail	1906	5,920	1,132,905	37,520,903	76	84,726	4,323,786	5,820	1,042,654	32,762,917	24	5,525	434,200
	1889	6,277	1,293,192	42,685,082	13	9,218	724,800	6,198	1,264,735	41,325,862	66	19,239	635,320
Freight and passenger	1906	4,227	1,105,901	[1]33,213,849	57	82,470	3,588,786	4,168	1,018,738	29,389,063	2	4,693	236,000
	1889	5,229	1,260,362	38,777,627	7	8,737	514,500	5,163	1,232,597	37,658,057	59	19,028	605,070
Yachts	1906	1,358	21,046	3,775,743	19	2,256	735,000	1,317	17,958	2,842,543	22	832	198,200
	1889	628	14,428	2,681,455	6	481	210,300	619	13,875	2,450,655	3	72	20,500
All other	1906	335	5,958	531,311	----	----	----	335	5,958	531,311	----	----	----
	1889	420	18,402	1,226,900	----	----	----	416	18,263	1,217,150	4	139	9,750
Unrigged [1]	1906	8,699	2,260,622	41,658,685	79	76,666	3,812,071	8,619	2,183,008	37,834,614	1	948	12,000
	1889	3,425	623,483	7,837,440	----	----	----	3,425	623,483	7,837,440	----	----	----

[1] The character of construction was not reported in 1889, but for purposes of comparison in this table all vessels are assumed to be of wood.

The progress made in the tonnage of iron and steel vessels was much more rapid than the gains in the tonnage of vessels constructed of wood.

Between 1889 and 1906 the tonnage of steamships operated from the Atlantic and Gulf ports nearly doubled, and the value almost trebled; at the same time there was a decrease both in the tonnage and in the value of sailing vessels. Since iron and steel are used to a great extent in the construction of steam vessels, the increase in steam tonnage means a gain in the use of iron and steel. The gross tonnage of steam vessels built of iron and steel was three times as great in 1906 as it was in 1889, and their value was more than four times as much. Wooden steamers increased in number and value from 1889 to 1906, but fell off in gross tonnage. There was, moreover, some gain in the number, tonnage, and value of steamers of composite construction, the use of wood and steel in building yachts being frequent. The wooden sailing vessels, except yachts, are rapidly decreasing.

The census of 1889 did not state the kind of material of which the unrigged craft then operated were constructed; there could, however, have been very little, if any, use of iron and steel in the construction of barges and lighters at that time. The gain in the tonnage of unrigged craft was extraordinarily large, both absolutely and relatively. In 1889 the tonnage of the unrigged craft constituted less than one-fourth of the total, whereas in 1906 it comprised nearly one-half of the aggregate gross tonnage. As unrigged craft can be moved only by the use of tugs, the growth of the tonnage of unrigged shipping has naturally been accompanied by an increase in the tonnage of towing vessels.

The number and gross tonnage of steamships, sailing vessels, and unrigged craft built along the Atlantic and Gulf coasts of the United States and documented each year from 1889 to 1906 are shown in Table 19, grouped according to the character of the materials employed in their construction.

TABLE 19.—NUMBER AND GROSS TONNAGE OF VESSELS BUILT AND DOCUMENTED EACH YEAR, BY CLASS AND BY CHARACTER OF CONSTRUCTION: 1889 TO 1906.[1], [2].

YEAR.	AGGREGATE.										STEAM.									
	Total.		Iron.		Steel.		Wood.		Composite.		Total.		Iron.		Steel.		Wood.		Composite.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	651	126,607	.....	.....	50	46,073	601	80,534	.....	.....	293	56,030	.....	.....	45	42,363	248	13,667	.....	.....
1905	655	210,537	.....	.....	56	94,218	599	116,319	.....	.....	239	94,202	.....	.....	42	84,894	197	9,308	.....	.....
1904	695	186,559	.....	.....	45	84,138	650	102,421	.....	.....	232	78,321	.....	.....	37	66,473	195	11,848	.....	.....
1903	837	244,748	.....	.....	54	121,189	783	123,559	.....	.....	231	119,588	.....	.....	48	107,283	183	12,305	.....	.....
1902	970	236,991	1	193	52	107,349	917	129,449	.....	.....	251	113,370	1	193	47	97,919	203	15,258	.....	.....
1901	823	236,948	1	10	55	100,601	767	136,337	.....	.....	215	98,368	1	10	45	85,556	169	12,802	.....	.....
1900	804	207,652	.....	.....	57	80,030	747	127,622	.....	.....	170	80,001	.....	.....	51	70,548	119	9,453	.....	.....
1899	631	154,586	.....	.....	55	60,356	576	94,230	.....	.....	168	61,868	.....	.....	49	51,326	119	10,542	.....	.....
1898	514	63,090	1	462	34	20,078	478	42,339	1	211	134	25,341	1	462	26	17,014	106	7,654	1	211
1897	609	96,009	1	159	33	22,954	575	72,896	.....	.....	123	31,095	1	159	23	21,308	99	9,628	.....	.....
1896	418	91,724	1	57	21	32,034	396	59,633	.....	.....	98	44,222	1	57	21	32,034	76	12,131	.....	.....
1895	453	59,984	3	2,439	29	20,621	421	36,924	.....	.....	111	30,955	3	2,439	24	19,916	84	8,600	.....	.....
1894	592	74,708	5	687	22	30,798	565	43,223	.....	.....	141	37,819	5	687	20	26,149	116	10,983	.....	.....
1893	599	89,109	16	15,441	12	13,500	570	59,765	1	403	139	41,659	16	15,441	11	12,119	111	13,696	1	403
1892	988	118,094	14	6,078	14	16,041	960	95,975	.....	.....	207	35,981	14	6,078	14	16,041	179	13,862	.....	.....
1891	944	218,392	[3] 32	35,594	5	10,671	907	172,127	.....	.....	216	67,074	[3] 32	35,594	3	9,341	181	22,139	.....	.....
1890	663	156,756	[4] 33	29,094	7	12,682	623	114,980	.....	.....	155	54,240	[4] 33	29,094	7	12,682	115	12,464	.....	.....
1889	657	93,912	19	17,223	11	5,849	627	70,840	.....	.....	149	41,308	18	17,190	11	5,849	120	18,269	.....	.....

YEAR.	SAIL.								UNRIGGED.					
	Total.		Iron.		Steel.		Wood.		Total.		Steel.		Wood.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	199	30,584	.....	.....	4	3,077	195	27,507	159	39,993	1	633	158	39,360
1905	278	74,912	.....	.....	5	3,225	273	71,687	138	41,423	9	6,099	129	35,324
1904	293	60,079	.....	.....	4	15,290	289	44,789	170	48,159	4	2,375	166	45,784
1903	399	63,794	.....	.....	4	12,184	395	51,610	207	61,366	2	1,722	205	59,644
1902	519	71,639	.....	.....	3	8,406	516	63,233	200	51,982	2	1,024	198	50,958
1901	398	87,399	.....	.....	8	13,300	390	74,099	210	51,184	2	1,745	208	49,436
1900	426	76,249	.....	.....	6	9,482	420	66,767	208	51,402	.....	.....	208	51,402
1899	354	66,160	.....	.....	2	6,207	352	59,953	109	26,558	4	2,823	105	23,735
1898	302	17,909	.....	.....	.....	.....	302	17,909	78	19,840	8	3,064	70	16,776
1897	279	19,959	.....	.....	.....	.....	279	19,959	207	44,955	10	1,646	197	43,309
1896	287	37,501	.....	.....	.....	.....	287	37,501	33	10,001	.....	.....	33	10,001
1895	320	24,633	.....	.....	.....	.....	320	24,633	22	4,396	5	705	17	3,691
1894	421	30,659	.....	.....	2	4,649	419	26,010	30	6,230	.....	.....	30	6,230
1893	408	33,524	.....	.....	.....	.....	408	33,524	52	13,926	1	1,381	51	12,545
1892	716	69,128	.....	.....	.....	.....	716	69,128	65	12,985	.....	.....	65	12,985
1891	635	127,147	.....	.....	.....	.....	635	127,147	93	24,171	2	1,330	91	22,841
1890	433	84,631	.....	.....	.....	.....	433	84,631	75	17,885	.....	.....	75	17,885
1889	417	37,279	1	33	.....	.....	416	37,246	91	15,325	.....	.....	91	15,325

[1] Exclusive of yachts.
[2] From the reports of the Commissioner of Navigation, Department of Commerce and Labor.
[3] Includes 2 vessels, tonnage 7,886, built of iron and steel.
[4] Includes 1 vessel, tonnage 2,707, built of iron and steel.

A limited number of vessels not built in the American yards are annually admitted to American registry under general acts of Congress.

The use of iron in the construction of the hulls of vessels has been abandoned. In 1889, 19 of the vessels built on the Atlantic and Gulf coasts had iron hulls; since 1895 there have been only 5 vessels thus built; and since 1902 none has been so constructed. The use of steel has largely increased. During 1889 only 11 vessels with steel hulls were built on the Atlantic and Gulf coasts; during 1890 only 7 vessels of this kind were constructed; and in 1891 only 5. In 1906, however, there were 50 vessels built of steel, but the figures for 1906 understate the progress that has been made in the use of steel in ship construction. The years from 1900 to 1903 were especially prosperous in American shipyards, and in each of these years the number and tonnage of steel-built vessels were larger than in 1906. With the progress of the American marine and the advance of the American shipbuilding industry, there will certainly be an increasing use made of steel. In the construction of American vessels in the shipyards of the Atlantic coast and Gulf of Mexico, wood is still used more largely than steel. Table 19, however, shows that the number and tonnage of wooden vessels are neither increasing nor declining. During the eighteen years covered by the table only 2 vessels constructed of both steel and wood were documented. Yachts are not included in this table. As shown in Table 18 the composite steam yachts increased from 3 in 1889 to 21 in 1906.

Most of the vessels built of steel are propelled by engines, although a few steel sailing vessels are documented each year. The number of wooden vessels with engines exceeded the number of wooden sailing ships in 1906, although the tonnage of the wooden sailing vessels is double that of the wooden steamers. In the construction of tugs, ferryboats, and passenger vessels for operation in quiet waters, and in the building of yachts, wood is still largely used. Likewise wood is used almost altogether in the construction of barges, lighters, and unrigged craft. In 1906 there was only 1 steel vessel of this class documented. During six of the years between 1889 and 1906 no unrigged craft of steel construction was documented.

REGISTERED AND DOCUMENTED VESSELS.

The navigation laws of the United States[1] stipulate that "vessels which may be captured in war by citizens of the United States and lawfully condemned as prize, or which may be adjudged to be forfeited for a breach of the laws of the United States, being wholly owned by citizens and no others, may be registered" under the American flag. The law also states that—

> The Commissioner of Navigation may issue a register or enrollment for any vessel built in a foreign country, whenever such vessel shall be wrecked in the United States, and shall be purchased and repaired by a citizen of the United States, if it shall be proved to the satisfaction of the Commissioner that the repairs put upon such vessel are equal to three-fourths of the cost of the vessel when so repaired.
>
> A vessel registered pursuant to law, which by sale has become the property of a foreigner, shall be entitled to a new register upon afterwards becoming American property, unless it has been enlarged or undergone change in build outside of the United States.

Table 20 shows the number, tonnage, and material used in the construction of vessels admitted to American registry under the general act of Congress of December 23, 1852, which was repealed February 22, 1906.

As the result of the Spanish-American War the number of vessels thus admitted was greater in 1898, 1899, and 1900 than in any other year except 1889, when 15 wooden craft, 12 of them sailing vessels and 3 unrigged, were added to that part of the American marine that is operated from the Atlantic coast and Gulf of Mexico. Some vessels have been admitted to American registry by special acts of Congress. For instance, the acts of May 10, 1892, and February 14, 1893, made possible the admission of the *City of New York* and the *City of Paris*, of foreign construction but of American ownership, to registration under the American flag.[2]

[1] Bureau of Navigation, "Navigation Laws of the United States," 1903, pages 17 and 18.

[2] The present names of these two vessels are the *New York* and the *Philadelphia*.

TABLE 20.—NUMBER AND GROSS TONNAGE OF VESSELS ADMITTED AT ATLANTIC AND GULF PORTS TO AMERICAN REGISTRY BY GENERAL ACT OF CONGRESS, BY CLASS AND BY CHARACTER OF CONSTRUCTION: 1889 TO 1906.[1]

YEAR.	AGGREGATE.								STEAM.							
	Total.		Iron.		Steel.		Wood.		Total.		Iron.		Steel.		Wood.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	5	9,081	2	3,345	2	5,633	1	103	3	8,554	1	2,921	2	5,633	.....	.....
1905	6	8,941	1	1,855	3	5,335	2	1,751	4	7,190	1	1,855	3	5,335	.....	.....
1904	2	5,253	1	693	1	4,560	.....	.....	1	4,560	.....	.....	1	4,560	.....	.....
1903	6	12,821	.....	.....	3	10,959	3	1,862	3	10,959	.....	.....	3	10,959	.....	.....
1902	4	4,399	1	1,347	1	2,214	2	838	1	2,214	.....	.....	1	2,214	.....	.....
1901	7	12,382	2	4,341	3	7,412	2	629	5	11,753	2	4,341	3	7,412	.....	.....
1900	12	7,993	2	4,541	.....	.....	10	3,452	1	2,798	1	2,798	.....	.....	.....	.....
1899	12	11,387	4	7,168	.....	.....	8	4,219	2	5,096	2	5,096	.....	.....	.....	.....
1898	12	12,558	4	6,544	1	3,362	7	2,652	4	8,030	3	4,668	1	3,362	.....	.....
1897	7	5,276	1	2,016	.....	.....	6	3,260	1	2,016	1	2,016	.....	.....	.....	.....
1896	6	5,650	1	2,461	2	2,870	3	319	1	1,696	.....	.....	1	1,696	.....	.....
1895	5	6,846	1	3,428	1	2,897	3	521	1	2,897	.....	.....	1	2,897	.....	.....
1894	4	1,843	1	135	.....	.....	3	1,708	1	135	1	135	.....	.....	.....	.....
1893	6	2,850	.....	.....	1	1,602	5	1,248	1	1,602	.....	.....	1	1,602	.....	.....
1892	9	3,108	.....	.....	1	1,044	8	2,064	1	1,044	.....	.....	1	1,044	.....	.....
1891	6	2,555	.....	.....	[2]1	451	5	2,104	[2]1	451	.....	.....	[2]1	451	.....	.....
1890	11	6,324	3	2,448	.....	.....	8	3,876	3	2,448	3	2,448	.....	.....	.....	.....
1889	15	5,968	.....	.....	.....	.....	15	5,968	.....	.....	.....	.....	.....	.....	.....	.....

YEAR.	SAIL.								UNRIGGED.					
	Total.		Iron.		Steel.		Wood.		Total.		Iron.		Wood.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	2	527	1	424	.....	.....	1	103	.....	.....	.....	.....	.....	.....
1905	2	1,751	.....	.....	.....	.....	2	1,751	.....	.....	.....	.....	.....	.....
1904	1	693	1	693	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903	2	594	.....	.....	.....	.....	2	594	1	1,268	.....	.....	1	1,268
1902	1	170	.....	.....	.....	.....	1	170	2	2,015	1	1,347	1	668
1901	2	629	.....	.....	.....	.....	2	629	.....	.....	.....	.....	.....	.....
1900	8	3,392	1	1,743	.....	.....	7	1,649	3	1,803	.....	.....	3	1,803
1899	8	4,982	2	2,072	.....	.....	6	2,910	2	1,309	.....	.....	2	1,309
1898	8	4,528	1	1,876	.....	.....	7	2,652	.....	.....	.....	.....	.....	.....
1897	5	2,937	.....	.....	.....	.....	5	2,937	1	323	.....	.....	1	323
1896	5	3,954	1	2,461	1	1,174	3	319	.....	.....	.....	.....	.....	.....
1895	2	3,501	1	3,428	.....	.....	1	73	2	448	.....	.....	2	448
1894	3	1,708	.....	.....	.....	.....	3	1,708	.....	.....	.....	.....	.....	.....
1893	4	992	.....	.....	.....	.....	4	992	1	256	.....	.....	1	256
1892	8	2,064	.....	.....	.....	.....	8	2,064	.....	.....	.....	.....	.....	.....
1891	5	2,104	.....	.....	.....	.....	5	2,104	.....	.....	.....	.....	.....	.....
1890	8	3,876	.....	.....	.....	.....	8	3,876	.....	.....	.....	.....	.....	.....
1889	12	4,801	.....	.....	.....	.....	12	4,801	3	1,167	.....	.....	3	1,167

[1] From the reports of the Commissioner of Navigation, Department of Commerce and Labor. [2] Yacht.

The number and tonnage of documented vessels added to the fleet of the Atlantic and Gulf coasts during each year from 1889 to 1906 are shown in Table 21, which has been compiled from the reports of the Commissioner of Navigation. This table shows almost all of the yearly additions made to the fleet; the number shown falls short of the total because it does not include undocumented craft.

The reports of the Commissioner of Navigation include a few vessels classed as "added from other sources," the number and tonnage of which the Census found it impracticable to obtain. The omission of this small group of vessels from Table 21 is not deemed a serious matter, because the craft were mainly rebuilt vessels which really do not constitute an addition to the fleet. Table 21, accordingly, comprises practically all vessels, except yachts, admitted at Atlantic and Gulf ports to American enrollment or registry, both those constructed in the United States and those built abroad and admitted to American registry under acts of Congress. The facts—to which attention has already been called—regarding the increasing use of steel for construction and steam for power are clearly shown.

TABLE 21.—NUMBER AND GROSS TONNAGE OF VESSELS ADDED TO THE DOCUMENTED FLEET EACH YEAR, BY CLASS AND BY CHARACTER OF CONSTRUCTION: 1889 TO 1906.[1]

YEAR.	AGGREGATE.										STEAM.									
	Total.		Iron.		Steel.		Wood.		Composite.		Total.		Iron.		Steel.		Wood.		Composite.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	666	141,809	3	3,574	53	55,342	609	82,797	1	96	303	69,491	2	3,150	48	51,632	252	14,613	1	96
1905	668	224,840	1	1,855	60	103,220	607	119,765	.....	.....	247	105,421	1	1,855	46	93,896	200	9,670	.....	.....
1904	707	195,138	3	2,344	46	88,698	658	104,096	.....	.....	242	84,909	2	1,651	38	71,033	202	12,225	.....	.....
1903	853	261,701	2	386	57	132,148	794	129,167	.....	.....	237	130,772	1	122	51	118,242	185	12,408	.....	.....
1902	984	248,073	3	2,120	56	114,172	925	132,072	.....	.....	255	120,025	1	193	50	104,335	204	15,497	.....	.....
1901	837	254,786	5	8,055	59	109,061	773	137,670	.....	.....	223	113,249	4	7,026	48	92,968	171	13,255	.....	.....
1900	835	230,867	5	12,403	60	82,498	770	135,906	.....	.....	182	92,808	4	10,720	52	71,027	126	11,061	.....	.....
1899	720	209,544	6	10,982	57	63,561	657	135,001	.....	.....	182	80,608	4	8,910	51	54,531	127	17,167	.....	.....
1898	540	94,121	9	15,358	39	32,559	491	45,993	1	211	150	50,600	7	12,359	31	29,495	111	8,535	1	211
1897	619	102,573	3	2,209	33	22,954	583	77,320	.....	.....	125	33,235	3	2,299	23	21,308	99	9,628	.....	.....
1896	431	105,188	2	2,518	25	41,224	404	61,446	.....	.....	104	52,567	1	57	24	40,050	79	12,460	.....	.....
1895	405	72,782	7	9,055	30	23,518	428	40,209	.....	.....	115	37,040	6	5,627	25	22,813	84	8,600	.....	.....
1894	509	78,021	8	1,904	22	30,798	569	45,319	.....	.....	145	39,424	8	1,904	20	20,149	117	11,371	.....	.....
1893	612	115,047	16	15,441	16	37,541	579	61,662	1	403	146	66,132	16	15,441	15	36,160	114	14,128	1	403
1892	1,001	121,580	14	6,078	15	17,085	972	98,417	.....	.....	210	37,275	14	6,078	15	17,085	181	14,112	.....	.....
1891	970	240,446	[2] 42	46,870	[3] 9	10,965	919	176,611	.....	.....	233	84,825	[2] 42	46,870	[3] 7	15,635	184	22,320	.....	.....
1890	680	160,378	[4] 38	33,256	7	12,682	635	120,440	.....	.....	162	58,451	[4] 38	33,256	7	12,682	117	12,513	.....	.....
1889	677	101,761	20	10,058	11	5,849	[5] 646	76,854	.....	.....	152	43,167	19	19,025	11	5,849	[5] 122	18,293	.....	.....

YEAR.	SAIL.								UNRIGGED.							
	Total.		Iron.		Steel.		Wood.		Total.		Iron.		Steel.		Wood.	
	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.	Number of vessels.	Gross tonnage.
1906	203	32,105	1	424	4	3,077	198	28,604	160	40,153	.....	.....	1	633	159	39,520
1905	282	76,725	.....	.....	5	3,225	277	73,500	139	42,694	.....	.....	9	6,099	130	36,595
1904	295	62,070	1	693	4	15,290	290	46,087	170	48,159	.....	.....	4	2,375	166	45,784
1903	406	67,083	.....	.....	4	12,184	402	54,899	210	63,846	1	264	2	1,722	207	61,860
1902	525	74,405	1	589	3	8,406	521	65,410	204	54,543	1	1,347	3	1,431	200	51,765
1901	404	90,356	1	1,029	9	14,348	394	74,979	210	51,181	.....	.....	2	1,745	208	49,436
1900	430	83,931	1	1,743	7	11,064	431	71,124	214	54,128	.....	.....	1	407	213	53,721
1899	420	100,736	2	2,072	2	6,207	422	92,457	112	28,200	.....	.....	4	2,823	108	25,377
1898	311	23,560	2	2,999	.....	.....	309	20,561	79	19,961	.....	.....	8	3,064	71	16,897
1897	286	24,060	.....	.....	.....	.....	286	24,060	208	45,278	.....	.....	10	1,646	198	43,632
1896	294	42,020	1	2,461	1	1,174	292	38,385	33	10,001	.....	.....	.....	.....	33	10,001
1895	325	30,500	1	3,428	.....	.....	324	27,072	25	5,242	.....	.....	5	705	20	4,537
1894	424	32,367	.....	.....	2	4,649	422	27,718	30	6,230	.....	.....	.....	.....	30	6,230
1893	412	34,516	.....	.....	.....	.....	412	34,516	54	14,399	.....	.....	1	1,381	53	13,018
1892	726	71,320	.....	.....	.....	.....	726	71,320	65	12,985	.....	.....	.....	.....	65	12,985
1891	942	130,500	.....	.....	.....	.....	942	130,500	95	25,121	.....	.....	2	1,330	93	23,791
1890	443	90,042	.....	.....	.....	.....	443	90,042	75	17,885	.....	.....	.....	.....	75	17,885
1889	431	42,102	1	33	.....	.....	430	42,069	94	16,492	.....	.....	.....	.....	94	16,492

[1] Embraces all vessels, exclusive of yachts except 1 in 1889 and 1 in 1891, reported by the Commissioner of Navigation as built, admitted to registry by acts of Congress, renationalized, purchased from the United States, or captured from enemy.
[2] Includes 2 vessels, tonnage 7,886, built of iron and steel.
[3] Includes 1 yacht, with a gross tonnage of 451.
[4] Includes 1 vessel, tonnage 2,707, built of iron and steel.
[5] Includes 1 yacht, with a gross tonnage of 13.

NUMBER AND TONNAGE OF VESSELS.

The gross and net tonnage of the various subclasses of steam, sail, and unrigged craft of the Atlantic and Gulf coasts in 1906 are shown in Table 22.

The net tonnage of the steamers averages two-thirds the gross tonnage. In the case of sailing vessels the average is somewhat higher, the net being approximately nine-tenths of the gross tonnage. In unrigged craft almost the entire capacity of the vessel is available for cargo, consequently the net tonnage is but slightly less than the gross. The general rule among shipping men is that in a modern freight steamer the net tonnage, when measured in accordance with the American laws, will average about two-thirds the gross. The figures in Table 22 prove this general rule of business men to be an accurate one. The ratio of net, gross, and cargo tonnage is sometimes expressed by saying that the gross tonnage is $1\frac{1}{2}$ times the net, and the cargo $2\frac{1}{4}$ times the net; that is, the ratios are 1 to $1\frac{1}{2}$ to $2\frac{1}{4}$. With sailing vessels the ratio of net to gross tonnage is ordinarily stated to be as 7 to 8; that is, the net tonnage is seven-eighths of the gross. The table, however, shows a somewhat higher ratio. Assuming the net tonnage to be seven-eighths of the gross, the ratio of net, gross, and cargo tonnage for sailing vessels would be as 7 to 8 to 12.

TABLE 22.—*Gross and net tonnage, with per cent net is of gross tonnage, by class and occupation of vessels: 1906.*

CLASS AND OCCUPATION.	Gross tonnage.	NET TONNAGE.	
		Number of tons.	Per cent of gross tonnage.
Total	4,851,421	4,186,451	86.3
Steam	1,457,894	972,320	66.7
Freight and passenger	1,045,811	704,560	67.4
Tugs and other towing vessels	148,992	90,021	60.4
Ferryboats	162,834	113,531	69.7
Yachts	70,461	45,228	64.2
All other	29,796	18,980	63.7
Sail	1,132,905	1,012,197	89.3
Freight and passenger	1,105,901	987,398	89.3
Yachts	21,046	19,317	91.8
All other	5,958	5,482	92.0
Unrigged	2,260,622	2,201,934	97.4
Canal boats	103,877	101,195	97.4
All other	2,156,745	2,100,739	97.4

The average size, value per ton, and value per vessel of the steam, sail, and unrigged craft of the Atlantic and Gulf coasts in 1889 and 1906 are stated in Table 23.

TABLE 23.—*Number, gross tonnage, and value of different classes of vessels: 1906 and 1889.*

CLASS.	Census.	Number of vessels.	Gross tonnage.	Value of vessels.	Average tonnage per vessel.	Average value per ton.	Average value per vessel.
Total	1906	20,032	4,851,421	$273,105,915	242	$56	$13,633
	1889	12,238	2,658,445	116,042,062	217	44	9,482
Steam	1906	5,413	1,457,894	193,926,327	269	133	35,826
	1889	2,536	741,770	65,518,640	292	88	25,835
Sail	1906	5,920	1,132,905	37,520,903	191	33	6,338
	1889	6,277	1,293,192	42,685,982	206	33	6,800
Unrigged	1906	8,699	2,260,622	41,658,685	260	18	4,789
	1889	3,425	623,483	7,837,440	182	13	2,288

The somewhat surprising fact is shown that the average size of both steamers and sailing vessels was less in 1906 than in 1889. Only in unrigged craft was there an increase in average capacity. The average value per ton of the steam vessels has largely increased; that of sailing vessels has remained constant; and that of unrigged craft has become larger.

The explanation of the small average size of steamships and sailing vessels is found in Table 24, where steam, sail, and unrigged craft are grouped according to gross tonnage.

It will be noted that over one-half of the steamers were each of less than 50 tons gross register; that four-fifths of them were of less than 200 tons gross register; and that only 30 were of 5,000 tons or more gross register. It will be remembered that the vessels classified as steamships include the considerable number of those operated by gasoline and other engines. The sailing vessels of the Atlantic and Gulf coasts averaged less than 200 tons gross register; almost two-thirds of the total number were of less than 50 tons gross register, and about four-fifths were of less than 200 tons gross register. There were only 29 sailing vessels with a gross register amounting to 2,500 tons or over. The unrigged craft averaged much larger than the sailing vessels and nearly as great as the steamships. The average size of this class of shipping is made high by the extensive use of large capacity barges in the coastwise traffic.

TABLE 24.—*Vessels grouped according to gross tonnage: 1906.*

TONNAGE.	Total.	Steam.	Sail.	Unrigged.
Total:				
Number of vessels	20,032	5,413	5,920	8,699
Gross tonnage	4,851,421	1,457,894	1,132,905	2,260,622
5 to 49 tons:				
Number of vessels	7,413	3,019	3,792	602
Gross tonnage	133,812	55,988	63,191	14,633
50 to 99 tons:				
Number of vessels	2,129	763	592	774
Gross tonnage	151,754	55,734	40,928	55,092
100 to 199 tons:				
Number of vessels	3,839	590	299	2,950
Gross tonnage	549,840	83,092	42,889	423,859
200 to 299 tons:				
Number of vessels	2,127	225	169	1,733
Gross tonnage	513,836	54,840	41,971	417,025
300 to 399 tons:				
Number of vessels	1,429	107	137	1,185
Gross tonnage	486,094	37,370	47,615	401,109
400 to 499 tons:				
Number of vessels	869	115	155	599
Gross tonnage	380,276	51,113	69,299	259,864
500 to 999 tons:				
Number of vessels	1,441	249	485	707
Gross tonnage	997,370	176,096	356,998	464,276
1,000 to 2,499 tons:				
Number of vessels	585	184	262	139
Gross tonnage	852,007	289,359	380,716	181,932
2,500 to 4,999 tons:				
Number of vessels	169	131	28	10
Gross tonnage	556,311	429,399	84,080	42,832
5,000 tons and over:				
Number of vessels	31	30	1	.....
Gross tonnage	230,121	224,903	5,218	.....

The information contained in Tables 22, 23, and 24 is supplemented by Table 25, which gives the average size and the average value per vessel and per ton of the iron and steel vessels, the wooden ships, and the craft of composite construction. Figures for both 1889 and 1906 are presented.

The average value per vessel and per ton of the total shipping of the Atlantic and Gulf coasts increased between those years; the gain, however, was in iron and steel and composite vessels and not in those of wooden construction, which show a decline in value both per vessel and per ton. The decline in wooden vessels is most marked in steamers, wood being used for small steamers and steel for larger craft. The newer wooden steamers are more valuable per ton than their predecessors were. Wooden steam tugs and ferryboats had a higher value per vessel and per ton in 1906 than in 1889. All classes of iron and steel steamers except "all other" increased in size and value per vessel. Iron and steel sailing vessels, as a whole, and sailing yachts increased in size and value; but the iron and steel sailing vessels used in the passenger and freight services decreased in value. Unrigged craft, as a whole, show a large growth in average tonnage and value.

TABLE 25.—AVERAGE GROSS TONNAGE AND VALUE PER VESSEL AND AVERAGE VALUE PER TON: 1906 AND 1889.

CLASS AND OCCUPATION.	Census.	TOTAL.			IRON AND STEEL.			WOOD.			COMPOSITE.		
		Average tonnage per vessel.	Average value per vessel.	Average value per ton.	Average tonnage per vessel.	Average value per vessel.	Average value per ton.	Average tonnage per vessel.	Average value per vessel.	Average value per ton.	Average tonnage per vessel.	Average value per vessel.	Average value per ton.
Total	1906	242	$13,633	$56	1,087	$135,693	$125	191	$6,155	$32	216	$25,477	$118
	1889	217	9,482	44	839	77,470	92	194	6,935	36	273	13,146	48
Steam	1906	269	35,826	133	1,094	148,681	136	83	10,319	124	182	31,438	172
	1889	292	25,835	88	843	78,141	93	182	15,339	84	224	22,825	102
Freight and passenger	1906	687	79,538	116	2,150	264,260	123	173	14,750	85	551	38,000	69
	1889	602	45,666	76	1,353	115,536	85	374	24,491	65	432	28,000	65
Tugs and other towing vessels	1906	88	15,322	174	217	37,324	172	58	10,131	176	69	7,500	109
	1889	56	9,318	166	83	15,794	189	53	8,676	163	39	3,633	92
Ferryboats	1906	603	73,965	123	902	125,762	139	338	27,963	83	.....	.....	.....
	1889	459	36,952	81	687	66,720	97	372	25,621	69	.....	.....	.....
Yachts	1906	45	13,501	302	340	110,346	325	22	6,071	275	102	32,667	319
	1889	67	20,709	311	195	65,989	339	43	12,225	284	118	45,000	382
All other	1906	84	15,962	189	399	83,487	209	41	6,811	165	327	50,000	153
	1889	336	27,926	83	1,014	86,161	85	183	14,405	79	92	22,200	242
Sail	1906	191	6,338	33	1,115	56,892	51	179	5,629	31	230	18,092	79
	1889	206	6,800	33	709	55,754	79	204	6,668	33	292	9,626	33
Freight and passenger	1906	262	7,858	30	1,447	62,961	44	244	7,051	29	2,347	118,000	50
	1889	241	7,416	31	1,248	73,500	59	239	7,294	31	323	10,255	32
Yachts	1906	15	2,780	179	119	38,684	326	14	2,158	158	38	9,009	238
	1889	23	4,270	186	80	35,050	437	22	3,959	177	24	6,833	285
All other	1906	18	1,586	89	.....	.....	.....	18	1,586	89	.....	.....	.....
	1889	44	2,921	67	.....	.....	.....	44	2,926	67	35	2,438	70
Unrigged	1906	260	4,789	18	970	48,254	50	253	4,390	17	948	12,000	13
	1889	182	2,288	13	.....	.....	.....	182	2,288	13	.....	.....	.....

CHARACTER OF PROPULSION AND HORSEPOWER.

The vessels classified as steamers include not only those propelled by steam but also those driven by gasoline and other engines. The power, moreover, is applied by screws, side wheels, and stern wheels.

Of the vessels propelled by mechanical power, about nine-tenths were driven with screws. One of the two ferryboats classed as "all other" was operated by a center paddle wheel and the other by a cable device.

The large number of vessels having gasoline engines is one of the striking facts shown in Table 26. Their total gross tonnage, however, constitutes but a small fraction of the gross tonnage of steam vessels. Most of the gasoline engines are used to drive screws, but 26 craft having stern wheels and 2 having side wheels were equipped with gasoline engines.

TABLE 26.—*Character of propulsion and power of steam vessels: 1906.*

CHARACTER OF PROPULSION AND POWER.	Number of vessels.	Gross tonnage.	Horsepower of engines.
Total	5,413	1,457,894	1,758,378
Steam	3,434	1,423,750	1,712,382
Gasoline	1,974	34,072	45,932
All other	5	72	64
Screw	4,858	1,169,305	1,458,521
Steam	2,907	1,135,578	1,413,088
Gasoline	1,946	33,655	45,369
All other	5	72	64
Side wheel	370	270,853	279,705
Steam	368	270,831	279,675
Gasoline	2	22	30
Stern wheel	183	17,621	20,090
Steam	157	17,226	19,557
Gasoline	26	395	533
All other	2	115	62
Steam	2	115	62

Table 27 shows the classification by propulsion and power of vessels, grouped with reference to occupation.

TABLE 27.—CHARACTER OF PROPULSION AND HORSEPOWER OF STEAM VESSELS, BY OCCUPATION: 1906.

OCCUPATION.	CHARACTER OF PROPULSION.					HORSEPOWER OF ENGINES.			
	Total.	Screw (number).	Side wheel (number).	Stern wheel (number).	All other (number).	Total.	Steam.	Gasoline.	All other.
Total	5,413	4,858	370	183	2	1,758,378	1,712,382	45,932	64
Freight and passenger	1,523	1,225	194	104	.....	1,003,177	992,963	10,214	.....
Tugs and other towing vessels	1,690	1,606	11	73	.....	382,557	381,051	1,506	.....
Ferryboats	270	111	156	1	2	158,335	158,140	195	.....
Yachts	1,577	1,573	1	3	.....	172,965	142,203	30,706	56
All other	353	343	8	2	.....	41,344	38,025	3,311	8

INCOME.

The gross income derived from the operation of the fleet of the Atlantic and Gulf coasts in 1906 was $159,759,924, more than two-thirds of which was secured from freight and passenger business, and less than one-third from other sources.

TABLE 28.—*Gross income—all vessels and craft, by occupation: 1906.*

OCCUPATION.	Total.	Freight.	Passenger.	All other.
Total	$159,759,924	$83,890,161	$25,643,332	$50,226,431
Freight and passenger	92,096,988	68,185,461	18,208,365	5,703,162
Towing vessels and unrigged craft	54,727,996	15,697,425	46,254	38,984,317
All other	12,934,940	7,275	7,388,713	5,538,952

The earnings of tugs and other towing vessels which are so largely used in the more important harbors and in towing coal barges along the coast amounted to $54,727,996. This total includes the earnings of the unrigged craft, and is considerably more than one-third of the gross revenue for the fleet of the Atlantic and Gulf coasts. The relative unimportance of the passenger business as compared with the freight is also a striking fact, less than one-sixth of the total income having been obtained from the transportation of passengers.

EMPLOYEES AND WAGES.

During the year 1906 an average of 109,985 employees was engaged in conducting the transportation by water on the Atlantic and Gulf coasts.

TABLE 29.—*Employees, and salaries and wages: 1906.*

	Number of employees.	Salaries and wages.
Total	109,985	$59,125,132
On vessels	77,124	38,352,259
On land	32,861	20,772,873
Officers, managers, clerks, etc	8,500	7,865,181
All other	24,361	12,907,692

The salaries and wages paid amounted to $59,125,132. The men employed on the vessels formed 70.1 per cent of all the employees, and their salaries and wages formed 64.9 per cent of the total.

FREIGHT.

The freight received and shipped at the Atlantic and Gulf ports includes three different categories of traffic: (1) That which moves coastwise between the ports of the Atlantic coast and Gulf of Mexico; (2) [*a*] that which is carried in American vessels between these ports and American ports other than those of the Atlantic and Gulf coasts, that is, ports of the Pacific Coast states, Hawaii, and Porto Rico, and [*b*] traffic carried in American vessels between ports of the Atlantic and Gulf coasts and foreign ports; and (3) the imports and exports of foreign trade handled in foreign vessels through the Atlantic and Gulf gateways. The tables compiled by the Census include the first two of these categories; that is, coastwise and intercoast freight movements and the foreign commerce handled in American ships.

The differences between the censuses of 1889 and 1906 have been pointed out in the United States section. The total freight handled at the Atlantic and Gulf ports in 1906 (including harbor traffic) was 140,512,043 tons as compared with a total of 52,712,124 tons in 1889. The limitations to be placed upon this comparison are pointed out in the United States section. It should be remembered that the shipments and receipts of principal commodities by ports in 1906, as stated in Table 31—65,360,958 tons of shipments and the same quantity of receipts—represent the freight moved from port to port and do not include the traffic carried on lighters and barges within the port areas. The quantity of traffic "carried on lighters and barges in and around harbors for all waters except the Great Lakes" in 1906 was estimated at 88,026,046 tons. The enormous barge traffic at New York and the relatively large barge traffic of certain other Atlantic and Gulf ports account for the greater portion of the total for the United States. This readily explains the difference between the total of shipments and receipts—65,360,958 tons—and the total freight carried by all craft employed on the Atlantic and Gulf seaboard in 1906—140,512,043 tons.

Possibly attention should be called to the fact stated in the United States section, that "the figures for the Atlantic coast and the Gulf of Mexico include practically the same class of traffic at both censuses, with the exception of the lighterage or harbor work reported for some ferryboats in 1906; this class of freight was omitted from the statistics for the division at the census of 1889 and was not fully reported for 1906." By keeping in mind this exception and the fact that it was necessary to resort to estimates in determining a part of the traffic included in the figures for freight carried, comparisons may be made between the figures for the total freight carried in 1889 and the figures for 1906. The gain in freight carried during the period was 166.6 per cent.

The commodities shipped at the Atlantic and Gulf ports are shown in Table 30.

TABLE 30.—*Freight shipped, by commodities: 1906.*

COMMODITY.	Quantity.
Canned goods—net tons	193,602
Cement, brick, and lime—net tons	4,738,177
Coal—net tons	19,149,753
Cotton—net tons	793,992
Flour—net tons	104,362
Fruits and vegetables—net tons	796,329
Grain—net tons	530,843
Ice—net tons	1,951,188
Iron ore—net tons	18,465
Lumber—M feet	2,793,742
Naval stores—net tons	373,261
Petroleum and other oils—barrels	16,840,716
Phosphate and fertilizer—net tons	1,187,883
Pig iron and steel rails—net tons	664,758
Stone, sand, etc—net tons	7,391,354
Tobacco—net tons	165,776
Miscellaneous merchandise—net tons	18,580,196

As would be expected, the coal shipments make up the largest single item of traffic. Next in point of tonnage come stone and sand; lumber; and cement, brick, and lime. Petroleum and other oils amounted to 16,840,716 barrels, which are equivalent to 2,670,205 net tons. Among the other large contributors to the total tonnage were ice, with nearly 2,000,000 tons, and phosphate and fertilizer, with over 1,000,000 tons. A large part of the total tonnage—28.4 per cent—consisted of the tonnage of miscellaneous merchandise and of general package freight.

"Many of the managing owners [of vessels] kept no record of the quantities of the different commodities carried and could therefore give only estimates in reply to the Census inquiry." [1] Some of the package freight not being shipped by weight, it became necessary to make estimates of the tonnage. It is, however, believed that as a result of the exercise of special care the figures of freight shipments and receipts presented in this report are approximately accurate.

Had it been practicable to do so, it would have been desirable to show the quantity of freight shipped from the ports of each state bordering on the Atlantic ocean and Gulf of Mexico. The totals by states, however, could not be determined with accuracy, because it was not possible for the Census agents to obtain exact statements of the shipments and receipts for all of the small ports. The best that could be done was for the agents to ascertain the exact tonnage of the traffic handled at each of the principal ports. The coastwise transportation companies furnished the information for each of the principal ports with precision and then supplied the figures for the traffic received and shipped at "all other ports." In order to divide the traffic among the states with strict accuracy it would be necessary to allocate the traffic handled at each of the "all other ports." Inasmuch as the traffic at these "all other ports" amounted to more than one-third of the total for all ports, the statement of the amount of traffic shipped and received at the seaboard of each of these states could be made only with approximate accuracy. In view of these practical difficulties it was deemed best to present the traffic by principal ports only and not by states.

The shipments and receipts of principal commodities in 1906 are stated for each of the principal ports of the Atlantic coast and Gulf of Mexico in Table 31. As this table is restricted to the freight carried in American vessels, the total receipts and shipments necessarily equal each other.

[1] See United States section of this report, page 33.

TABLE 31.—SHIPMENTS AND RECEIPTS OF PRINCIPAL COMMODITIES, BY PORTS: 1906.

PORT.	TOTAL (NET TONS).		CANNED GOODS (NET TONS).		CEMENT, BRICK, AND LIME (NET TONS).		COAL (NET TONS).		COTTON (NET TONS).		FLOUR (NET TONS).	
	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.
Total	65,360,958	65,360,958	193,602	193,602	4,738,177	4,738,177	19,149,753	19,149,753	793,992	793,992	104,362	104,362
Baltimore, Md	3,579,407	1,858,443	49,005	18,640	11,028	21,936	2,274,731	15,026	12,188	51,130	4,546	19
Bangor, Me	255,613	319,546	10	.....	.....	9,799	40	262,981	.....	.....	40	.....
Boston, Mass	887,001	6,533,573	15,156	16,746	2,697	77,707	3,080	4,699,655	48	145,360	1,010	.....
Charleston, S. C	303,950	414,730	610	581	196	42,553	1,059	83,371	62,882	4,056	310	648
Fall River, Mass	274,646	786,392	1,400	1,050	420	2,590	.....	570,438	700	14,900	200	1,430
Galveston, Tex	734,915	960,982	86	14,312	134	13,865	1,795	50,390	137,628	94,278	856	.....
Gulfport, Miss	48,061	346,096	25	27	.....	.....	.....	.....	.....	.....	57	4
Jacksonville, Fla	661,615	331,951	30	457	10	18,154	350	97,356	1,940	.....	150	1,850
Jersey City, N. J	186,982	167,548	.....	.....	19,735	3,428	117,866	3,789	.....	.....	.....	.....
Mobile, Ala	260,725	102,533	736	3,038	591	4,814	1,481	4,863	15,383	22,638	2,536	2
New Bedford, Mass	163,951	581,176	.....	.....	96	.....	2,020	476,879	.....	.....	78	.....
New Haven, Conn	161,666	2,156,814	1,500	10,800	600	3,261	.....	1,830,953	.....	.....	200	8,400
New London, Conn	240,305	887,404	.....	60	2,405	2,280	8,450	592,555	.....	440	.....	55
New Orleans, La	741,621	1,182,863	823	1,056	490	21,355	3,419	12,631	45,459	7,885	16,605	.....
New York, N. Y	8,598,374	17,507,906	46,191	22,880	181,425	3,491,267	943,592	502,345	47,289	359,185	37,537	4,029
Norfolk and Newport News, Va	7,680,230	2,808,346	2,973	29,158	4,265	29,528	4,081,999	102,521	118,695	3,697	4,973	2,907
Pensacola, Fla	56,130	123,632	329	8	134	.....	4,156	4,131	.....	36	1,954	.....
Philadelphia, Pa	5,213,485	2,721,456	2,580	9,563	6,427	3,562	3,784,825	31,911	754	10,983	4,881	95
Port Arthur, Tex	1,052,778	39,363	.....	.....	.....	80	.....	430	.....	.....	.....	.....
Portland, Me	303,295	1,357,316	9,517	1,430	947	8,051	3,138	1,124,065	.....	6,770	1,854	.....
Portsmouth, N. H	25,390	362,820	.....	.....	19,060	.....	6,130	341,261	.....	.....	.....	.....
Providence, R. I	341,524	2,749,511	1,563	3,834	2,060	13,262	849	2,258,375	11,785	31,064	1,952	.....
Rockland, Me	175,904	149,496	2	5	124,641	7,833	1,903	76,270	.....	.....	1,385	.....
Savannah, Ga	907,397	582,966	1,057	16,487	15	24,714	2,701	130,149	150,352	8,171	520	.....
Tampa and Port Tampa City, Fla	372,467	188,692	83	1,155	285	2,082	.....	35,560	.....	.....	844	2,419
Washington, D. C	92,910	599,177	40	1,502	872	2,054	46,962	88,161	.....	.....	20	12
Wilmington, Del	95,241	250,188	50	50	990	25	6,985	2,178	.....	.....	50	200
Wilmington, N. C	121,930	145,209	1,918	207	1,719	16,115	242	8,292	159	3,649	3,523	346
Ports other than those on the Atlantic and Gulf coasts of the United States	1,587,789	2,340,843	501	421	950	18,039	9,004	285,248	149	.....	.....	34,840
All other Atlantic and Gulf ports	30,235,656	16,803,986	57,417	40,135	4,355,985	899,823	7,842,976	5,457,969	188,581	29,750	18,281	47,106

TABLE 31.—SHIPMENTS AND RECEIPTS OF PRINCIPAL COMMODITIES, BY PORTS: 1906—Continued.

PORT.	FRUITS AND VEGETABLES (NET TONS).		GRAIN (NET TONS).		ICE (NET TONS).		IRON ORE (NET TONS).		LUMBER (NET TONS).		NAVAL STORES (NET TONS).	
	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.
Total	796,329	796,329	530,843	530,843	1,951,188	1,951,188	18,465	18,465	6,050,814	6,050,814	373,261	373,261
Baltimore, Md	3,789	58,293	45,616	52,185	732	47,154	1,767	2,450	10,447	503,351	354	22,758
Bangor, Me			156	150	43,046				201,817	1,976		
Boston, Mass	43,311	69,418	2,869	380		600	736		19,383	299,566	162	24,461
Charleston, S. C	220	12,246	1,897	5,911	53				136,941	5,266	3,398	1,308
Fall River, Mass		575	5,490	850	100				3,261	21,288		
Galveston, Tex	64,262	26,262	20,279	3,782	25				19,265	21,779		
Gulfport, Miss	1		292		2				42,703	328,860	100	14,990
Jacksonville, Fla	51,299	95	500	5,074	60				499,805	3,749	46,137	1,737
Jersey City, N. J			26,126		6	1,057		602	583	1,578		
Mobile, Ala	410	890	18,937	501	201				147,566	6,635	1,173	1,992
New Bedford, Mass			80		30	5,714			20,934	17,990		
New Haven, Conn	350	10,450				1,760		750	416	48,230	600	300
New London, Conn		380	379	44	73	1,489			1,496	13,564		
New Orleans, La	15,707	22,079	62,294	50	1,970				55,263	148,176	24	15,475
New York, N. Y	105,927	319,304	97,372	59,560	50	1,758,179	404	824	129,556	2,393,694	7,822	142,724
Norfolk and Newport News, Va	105,675	71,433	4,449	8,977	372	12,330	3,018	636	446,628	122,378	4,796	767
Pensacola, Fla	39		16,907		505				19,658	82,561	1,686	27,257
Philadelphia, Pa	9,528	66,469	47,491	6,069	1,965	36,640	235		9,402	655,017	142	29,551
Port Arthur, Tex		72							33,460	33,253		
Portland, Me	5,455		8,253		9,772			3	31,782	27,788	1,590	720
Portsmouth, N. H					200					231		
Providence, R. I	1,653	6,420	1,419	558	350	5,599			3,103	55,650	5	533
Rockland, Me	4	475	3,845	90	1,451				3,585	11,028	50	
Savannah, Ga	23,144	7,995	2,103	69,066	10				448,930	5,397	105,913	5,947
Tampa and Port Tampa City, Fla	1,632	4,204	2,944	5,858	54	1,716			36,607	1,069	3,812	4,108
Washington, D. C	330	783	8	542	6,800	24,396			1,866	41,452		
Wilmington, Del	100	12,800	25	3,304						6,093		
Wilmington, N. C	70	1,042	4,992	1,919	276	10			62,586	9,834	13,949	10,852
Ports other than those on the Atlantic and Gulf coasts of the United States	101,208	13,840	5,976	123,133		4,436	1,850	741	237,614	288,485		375
All other Atlantic and Gulf ports	262,215	90,804	150,213	182,840	1,883,085	50,099	10,455	12,459	3,426,097	894,276	181,548	67,406

PORT.	PETROLEUM AND OTHER OILS (NET TONS).		PHOSPHATE AND FERTILIZER (NET TONS).		PIG IRON AND STEEL RAILS (NET TONS).		STONE, SAND, ETC. (NET TONS).		TOBACCO (NET TONS).		MISCELLANEOUS MERCHANDISE (NET TONS).	
	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.	Shipments.	Receipts.
Total	2,670,205	2,670,205	1,187,883	1,187,883	664,758	664,758	7,391,354	7,391,354	165,776	165,776	18,580,196	18,580,196
Baltimore, Md	83,921	71,154	251,641	167,285	94,979	22,458	2,022	60,805	1,343	48,142	731,298	695,657
Bangor, Me	34	19,200		2,536		1,450	106	4,655			10,364	16,799
Boston, Mass	9,192	188,442	42,873	12,515	653	32,849	2,853	239,462	244	8,404	742,794	718,008
Charleston, S. C	961	11,338	29,210	30,653			199	28,609	9		66,005	188,190
Fall River, Mass	73	4,450		200		2,950	10,000	12,702		200	253,002	152,769
Galveston, Tex	7,417	39,562	61	1,647	257	161,462	52,003	71,586	402		430,445	462,057
Gulfport, Miss	7	146		1,125					1		4,873	944
Jacksonville, Fla	3,097	15,424	420	4,800		2,212			573		57,184	181,043
Jersey City, N. J	225	90	100	1,501	18,702	1,000	2,950	149,591			689	4,912
Mobile, Ala	99	403	15,612	21,200	20	90	6,286		57	55	49,637	35,412
New Bedford, Mass	80	1,311						2,002			140,633	77,280
New Haven, Conn	191	3,607	370	1,239		37,445		28,682	600	2,000	156,839	168,928
New London, Conn	596	4,905	257	430		20	200	1,950		5	226,449	269,227
New Orleans, La	25,983	73,398	2,827	5,308	1,431	15,403		551,827	560	50	508,766	308,170
New York, N. Y	270,619	692,482	108,585	16,500	265,663	91,584	1,609,264	3,184,477	10,331	88,707	4,736,747	4,380,165
Norfolk and Newport News, Va	4,150	14,215	33,737	181,479	224,485	12,377	1,075	153,210	99,860	5,532	2,539,080	2,057,201
Pensacola, Fla	497		415						37	3	9,813	9,636
Philadelphia, Pa	211,531	414,451	66,390	49,228		42,851	35,592	324,506	517	427	1,031,225	1,040,133
Port Arthur, Tex	1,011,164					2,133					8,154	3,395
Portland, Me	609	14,430	298	2,961	400	2,500	525	32,189	1,545	200	227,610	136,269
Portsmouth, N. H								20,833				495
Providence, R. I	1,991	8,794	471	673	2,950	48,038	3,094	33,014	561	1,811	307,727	281,886
Rockland, Me	830	169	50	25		260	10,936	10,737			27,222	42,604
Savannah, Ga	140	13,250	7,449	44,075	29,303	1,326		55	1,736	638	134,024	255,696
Tampa and Port Tampa City, Fla	420	83,369	273,598			784	1,800	4,770	2	2,916	50,386	38,682
Washington, D. C	17	26,093	367				4,431	296,930			31,197	117,252
Wilmington, Del	2	23,848	200	100			15,507	131,341		75	71,332	69,574
Wilmington, N. C	378	25,282	12,330	21,276				1,434	42		19,746	44,951
Ports other than those on the Atlantic and Gulf coasts of the United States	5,328	139,488	12,023	8,700	4,588	8,529	4,999	2,884	28,407	509	1,175,192	1,411,175
All other Atlantic and Gulf ports	1,030,653	780,904	328,599	612,487	21,327	177,037	5,627,512	2,043,103	18,949	6,102	4,831,763	5,411,686

The total trade carried on between the ports covered by the table was 65,360,958 tons. This table comprises, first of all, the Atlantic and Gulf coastwise movements, and secondly, the relatively small amount of freight traffic between the ports of the Atlantic and Gulf coasts and the ports of Porto Rico, the Pacific coast, Hawaii, and foreign ports. The shipments in the vessels of the Atlantic coast and Gulf of Mexico from ports not on the Atlantic and Gulf coasts amounted to 1,587,789 tons. By taking this sum from the total shipments it is found that the coastwise shipments were 63,773,169 tons. By similar process the coastwise traffic received at the ports of the Atlantic and Gulf coasts is shown to have been 63,020,115 tons.

New York naturally led all other ports both in shipments and in receipts. It is a notable fact, moreover, that the receipts at New York were more than double the shipments from that port. The shipments, however, were much the larger in the case of Norfolk and Newport News, the combined receipts for the two ports being only a little over one-third the shipments. The shipments from Norfolk and Newport News were within a million tons as large as those from New York. For Philadelphia and Baltimore also the discrepancy between shipments and receipts is striking, the shipments being nearly double the receipts. The excess of shipments over receipts at such ports as Norfolk, Newport News, Philadelphia, and Baltimore is mainly accounted for by their large outbound traffic in coal; on the other hand, ports like Boston, Providence, and New Haven receive large shipments of coal coastwise, and also considerable quantities of lumber, the combined tonnages of which readily account for most of their excess of receipts over shipments.

The trade carried on at each of the 28 ports included in the table and the character of their commerce are shown in detail. In the case of Port Arthur, Tex., nearly all of the traffic in 1906 consisted of petroleum and lumber, while in the case of Gulfport, Miss., lumber accounts for most of the traffic in that year. On the other hand, at some ports having only a comparatively small amount of tonnage the traffic comprised almost all the classes of goods enumerated in the table. As instances of such, Wilmington, N. C., and Mobile, Ala., may be mentioned.

TRAFFIC AT AND ABOUT NEW YORK CITY.

While the port of New York alone greatly exceeds all other American ports in the amount of traffic, it is also the center of a much larger volume of traffic. In collecting the statistics, Hoboken, Jersey City, Newark, Perth Amboy, and South Amboy were treated as separate ports. As a matter of fact, the water-borne traffic at each of these ports may properly be considered as part of that handled in and about New York.

Table 32 shows the total receipts and shipments at these five ports and at New York.

TABLE 32.—SHIPMENTS AND RECEIPTS OF PRINCIPAL COMMODITIES AT HOBOKEN, JERSEY CITY, NEWARK, NEW YORK, PERTH AMBOY, AND SOUTH AMBOY: 1906.

COMMODITY.	TOTAL.		HOBOKEN.		JERSEY CITY.		NEWARK.		NEW YORK.		PERTH AMBOY.		SOUTH AMBOY.	
	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).	Shipments (net tons).	Receipts (net tons).
Total	13,651,221	18,437,742	552,348	43,774	186,982	167,548	5,318	315,681	8,598,374	17,507,906	1,463,185	398,883	2,845,014	3,950
Canned goods	46,191	22,880	.....	.....	.....	.....	.....	.....	46,191	22,880	.....	.....	.....	.....
Cement, brick, and lime	232,241	3,889,235	5,070	58	19,735	3,428	2,915	92,696	181,425	3,491,267	5,100	300,250	17,996	1,536
Coal	5,832,927	508,747	546,181	.....	117,806	3,789	.....	2,613	943,592	502,345	1,441,817	.....	2,783,471	.....
Cotton	47,294	359,185	.....	.....	.....	.....	.....	.....	47,289	359,185	5	.....	.....	.....
Flour	37,537	4,029	.....	.....	.....	.....	.....	.....	37,537	4,029	.....	.....	.....	.....
Fruits and vegetables	105,927	319,304	.....	.....	.....	.....	.....	.....	105,927	319,304	.....	.....	.....	.....
Grain	124,083	76,860	585	17,300	26,126	.....	.....	.....	97,372	59,560	.....	.....	.....	.....
Ice	122	1,759,236	66	.....	6	1,057	.....	.....	50	1,758,179	.....	.....	.....	.....
Iron ore	404	1,426	.....	.....	.....	602	.....	.....	404	824	.....	.....	.....	.....
Lumber	131,667	2,462,278	272	786	583	1,578	.....	42,502	129,556	2,393,694	220	22,136	1,036	1,582
Naval stores	7,985	142,724	.....	.....	.....	.....	.....	.....	7,822	142,724	163	.....	.....	.....
Petroleum and other oils	271,622	696,021	.....	.....	225	90	.....	3,449	270,619	692,482	778	.....	.....	.....
Phosphate and fertilizer	110,413	74,528	.....	.....	100	1,501	1,728	.....	108,585	16,500	.....	56,527	.....	.....
Pig iron and steel rails	284,539	92,584	174	.....	18,702	1,000	.....	.....	265,663	91,584	.....	.....	.....	.....
Stone, sand, etc	1,656,574	3,510,688	.....	5,433	2,950	149,591	.....	171,187	1,609,264	3,184,477	7,642	.....	36,718	.....
Tobacco	10,331	88,707	.....	.....	.....	.....	.....	.....	10,331	88,707	.....	.....	.....	.....
Miscellaneous merchandise	4,751,364	4,429,310	.....	20,197	689	4,912	675	3,234	4,736,747	4,380,165	7,460	19,970	5,793	832

The total shipments from the six ports, of which New York is the immediate center, amounted to 13,651,221 tons, as contrasted with 8,598,374 tons for the port of New York proper. Of the five ports about New York, South Amboy led in the total shipments and Perth Amboy came second, facts which are accounted for by the large shipments of coal. Hoboken had shipments amounting to 552,348 tons, nearly all of which consisted of coal. The receipts at these six ports enter mainly through New York. None of the other five ports had receipts amounting to 400,000 tons.

In studying Table 32 the fact should be kept in mind that the statistics presented in it cover only the traffic shipped from and delivered at the ports named in the table. In addition to this, 1,706,131 tons (coal 1,551,991 tons, other freight 154,140 tons) were shipped from, and 30,514 tons were received at, minor ports around New York harbor, and a vast volume of freight was handled by unrigged craft in and about this great port. Data relating to unrigged craft are stated in Table 33.

TABLE 33.—*Unrigged craft operating in and around New York harbor: 1906.*

KIND.	Number of vessels.	Gross tonnage.	Freight lightered (net tons).
Total	5,289	1,470,791	55,131,418
Canal boats	305	47,640	1,338,741
Coal boats	1,859	453,841	14,691,914
All other unrigged	3,125	969,310	39,100,763

It was found impossible to make a strict division between canal boats and coal boats. It often happens that canal boats are used for transporting coal for a large part of the year, and when so used they were classified as coal boats, and not as canal craft. It was also found impossible to segregate closely the statistics of unrigged craft used in the port of New York from the statistics of other vessels engaged in the commerce of New York. This difficulty is illustrated by the fact that a fleet of 20 canal boats was reported as being operated between Philadelphia, Pa., and Newburg, N. Y., as well as between points in New York harbor. This fleet of 20 boats carried 78,434 tons of freight and did lightering work to the amount of 75,133 tons. While it was not possible to ascertain just how much of this lightering was confined to New York harbor, it was thought best to consider the entire fleet as a part of the New York harbor craft. As another instance of the difficulty just noted, reference may be made to the fact that 1 boat made eight trips between Buffalo and New York, and two between Baltimore and New York, and also did lightering to the amount of 2,100 tons within New York harbor. Because of the lightering work done, this boat was assigned to New York. Facts such as these show that the total number and gross tonnage stated in Table 33 probably fully cover the number and tonnage of unrigged craft engaged in New York harbor work.

Table 33 shows 55,131,418 tons of freight to have been lightered in and around New York harbor, and Table 32 shows the shipments from New York and the five adjacent ports to have been 13,651,221 tons, and the receipts 18,437,742 tons, to which is to be added the freight shipments and receipts of the minor ports, 1,706,131 tons and 30,514 tons, respectively. The sum of these, 33,825,608 tons, represented the traffic taken into and out of the harbor area of which New York is the center. This traffic and the freight lightered within the port, 55,131,418 tons, make a total of 88,957,026.

This tonnage, however, does not cover the entire water-borne commerce handled in and about New York. In order to secure that total it is necessary to add the tonnage of the import and export traffic in foreign vessels. Statistics in regard to the import and export trade are published by the Bureau of Statistics of the Department of Commerce and Labor, but these statistics do not give the total tonnage of the imports and exports, although they state the value and to some extent the quantity of the various commodities received and shipped. The exact tonnage of the American imports and exports can not be determined from official statistics.

The imports at New York in 1906 in foreign vessels were valued at $622,890,044 and the exports at $536,068,474, the combined value of imports and exports being $1,158,958,518. The foreign trade carried on at the six ports named in Table 32 is credited by the Bureau of Statistics to three customs districts—New York, Perth Amboy, and Newark. The value of the exports from Perth Amboy and Newark in foreign vessels were $2,306,079 and the imports $8,599,580. By combining these with the corresponding figures for New York, the amounts for the three customs districts in foreign vessels become: Exports, $538,374,553; imports, $631,489,624; total, $1,169,864,177.

In an elaborate investigation made in the years 1899 to 1901 by the Isthmian Canal Commission into the cargo tonnage of American maritime commerce, it was found that the average value of the cargo ton of exports from the Atlantic coast was $35.98, and that the average value of the cargo ton of imports was $62.84. Assuming that the average value per ton of the exports from New York and vicinity in 1906 was $35.98, the tonnage was 14,963,162; and if the average value of the imports be taken as $62.84 per ton, the tonnage of imports at New York, Perth Amboy, and Newark was 10,049,167, making a total tonnage of exports and imports of 25,012,329. This total must be taken only as an approximation, although it is probably a fairly accurate one. By combining this total with the 88,957,026 tons of freight shipped, received, and lightered, the total traffic moved on the waterways at and around New York is found to have been 113,969,355 tons in 1906.

This total represents approximately the amount of freight handled by water in and around New York. It does not, however, for reasons that have already been explained, include the full amount of freight carried by ferryboats. Moreover, it was found impossible to make an exact segregation of the freight carried to and from points that may be considered adjacent to New York as distinguished from freight that was shipped and delivered at nonadjacent points. The factor of uncertainty in this connection is probably not a large one. The only other fact to which attention needs to be called is that the totals given in Table 33 include boats that are operated in and around the harbor of New York during a part of the year and are used elsewhere the remainder of the twelve months. If calculations regarding the harbor work of other large ports were to be made, care would have to be taken to avoid duplication.

FOREIGN COMMERCE HANDLED AT THE ATLANTIC AND GULF PORTS.

Just as, in order to make a complete statement of the freight traffic for the port of New York, it was necessary to show the foreign as well as the domestic trade, so a similar presentation is necessary in the case of other Atlantic and Gulf ports.

TABLE 34.—VALUE OF IMPORTS AND EXPORTS OF MERCHANDISE, BY PRINCIPAL CUSTOMS DISTRICTS, FOR YEAR ENDING JUNE 30, 1906.[1]

CUSTOMS DISTRICT.	AGGREGATE.		IMPORTS.		EXPORTS.	
	Value.	Per cent of group.	Value.	Per cent of group.	Value.	Per cent of group.
Atlantic and Gulf ports	$2,459,047,706	.....	$1,028,546,453	.....	$1,430,501,253	.....
Atlantic ports	2,036,340,868	100.0	974,562,799	100.0	1,061,778,069	100.0
New York, N. Y.	1,341,511,137	65.9	734,350,823	75.4	607,160,314	57.2
Boston and Charlestown, Mass.	205,181,724	10.1	106,442,077	10.9	98,739,647	9.3
Philadelphia, Pa.	153,365,662	7.5	70,801,273	7.3	82,564,389	7.8
Baltimore, Md.	140,009,699	6.9	30,084,653	3.1	109,925,046	10.4
Savannah, Ga.	66,342,620	3.3	1,503,069	0.2	64,839,551	6.1
Newport News, Va.	22,749,651	1.1	2,630,317	0.3	20,119,334	1.9
Wilmington, N. C.	18,970,314	0.9	503,385	0.1	18,466,929	1.7
Portland and Falmouth, Me.	15,918,392	0.8	1,232,928	0.1	14,685,464	1.4
Norfolk and Portsmouth, Va.	12,807,446	0.6	780,231	0.1	12,027,215	1.1
Brunswick, Ga.	12,645,925	0.6	19,853	.....	12,626,072	1.2
All other Atlantic ports	46,838,298	2.3	26,214,190	2.7	20,624,108	1.9
Gulf ports	422,706,838	100.0	53,983,654	100.0	368,723,184	100.0
New Orleans, La.	189,944,308	44.9	39,464,982	73.1	150,479,326	40.8
Galveston, Tex.	171,336,528	40.5	5,018,876	9.3	166,317,652	45.1
Mobile, Ala.	26,575,706	6.3	4,851,326	9.0	21,724,380	5.9
Pensacola, Fla.	18,826,579	4.5	386,457	0.7	18,440,122	5.0
All other Gulf ports	16,023,717	3.8	4,262,013	7.9	11,761,704	3.2

[1] Bureau of Statistics, Department of Commerce and Labor, "Commerce and Navigation of the United States," 1906.

The total value of the imports and exports handled at the Atlantic and Gulf ports amounted to nearly $2,500,000,000, somewhat over two-fifths consisting of imports and somewhat less than three-fifths of exports. The foreign trade of the Atlantic ports comprised 82.8 per cent of the total, and that of the Gulf cities 17.2 per cent. New York so far outranked all other ports that her foreign trade was 65.9 per cent of the total for the Atlantic ports and 54.6 per cent of the total for the Atlantic and Gulf ports. In the import trade New York's leadership was more pronounced than in the export traffic, although more than half of the commodities shipped abroad from the Atlantic ports passed through her port. Boston was second among American ports in foreign trade, with a total value of imports and exports amounting to less than one-sixth that for New York. Philadelphia and Baltimore were third and fourth, respectively, among the Atlantic ports in value of foreign trade, but both ranked lower than New Orleans and Galveston.

Of the Gulf ports, New Orleans held first place in the total value of imports and exports, although the exports of Galveston were of greater value than those of New Orleans. The progress of Galveston during recent years has been rapid, and the city has the prospect of becoming the ranking port on the Gulf.

The place of New Orleans in the import trade of the Gulf is similar to that held by New York in the import commerce of the Atlantic, the imports of New Orleans being valued at 73.1 per cent of the total for the Gulf, and those of New York being valued at 75.4 per cent of the total for the Atlantic.

ENTRANCES AND CLEARANCES OF VESSELS—FOREIGN TRADE OF ATLANTIC AND GULF PORTS.

Statistics of the tonnage of the vessels engaged in foreign commerce at the Atlantic and Gulf ports afford another measure of the magnitude of the foreign trade of the United States. Table 35 shows the total number and tonnage of the vessels entered and cleared in the foreign trade at the Atlantic and Gulf ports and states what percentage of the tonnage was furnished by American vessels. For each of the six largest Atlantic and Gulf ports the facts are shown for steamers and sailing vessels separately. Only 10.8 per cent of the tonnage of the vessels entered was under the American flag, and only 11.1 per cent of the tonnage cleared was American.

TABLE 35.—VESSELS ENTERED AND CLEARED IN THE FOREIGN TRADE, BY PRINCIPAL SEABOARD CUSTOMS DISTRICTS: 1906.[1]

CUSTOMS DISTRICT AND CLASS OF VESSEL.	ENTERED.							CLEARED.						
	Total.		American vessels.		Foreign vessels.		Per cent tonnage of American vessels forms of total.	Total.		American vessels.		Foreign vessels.		Per cent tonnage of American vessels forms of total.
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.		Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.	
Atlantic and Gulf coasts	14,343	24,345,505	2,482	2,630,072	11,861	21,715,433	10.8	14,425	24,131,206	2,582	2,672,794	11,843	21,458,412	11.1
Baltimore, Md.:														
Sailing	80	54,913	50	23,140	30	31,773	42.1	61	27,654	43	16,066	18	11,588	58.1
Steam	768	1,493,677	4	3,452	764	1,490,225	0.2	770	1,584,118	6	6,340	764	1,577,778	0.4
Boston and Charlestown, Mass.:														
Sailing	543	103,465	36	8,543	507	94,922	8.3	623	151,015	93	43,585	530	107,430	28.9
Steam	1,092	2,854,690	108	183,569	984	2,671,121	6.4	841	2,092,317	99	162,869	742	1,929,448	7.8
New York, N. Y.:														
Sailing	866	400,446	246	121,673	620	278,773	30.4	723	373,633	142	85,746	581	287,887	22.9
Steam	3,213	10,076,547	403	1,220,023	2,810	8,856,524	12.1	2,967	9,540,327	424	1,224,344	2,543	8,315,983	12.8
Philadelphia, Pa.:														
Sailing	153	101,188	72	38,696	81	62,492	38.2	196	172,022	116	103,383	80	68,639	60.0
Steam	981	1,979,708	52	69,633	929	1,910,075	3.5	1,023	2,078,615	49	62,779	974	2,015,836	3.0
Galveston, Tex.:														
Sailing	46	36,134	28	25,927	18	10,207	71.7	31	19,786	14	10,202	17	9,584	51.6
Steam	539	1,054,549	13	13,736	526	1,040,813	1.3	640	1,264,323	15	15,575	625	1,248,748	1.2
New Orleans, La.:														
Sailing	32	25,508	6	2,995	26	22,513	11.7	26	20,498	4	1,042	22	19,456	5.1
Steam	910	1,690,498	56	121,333	854	1,569,165	7.2	954	1,819,150	56	124,510	898	1,694,640	6.8

[1] Bureau of Statistics, Department of Commerce and Labor, "Commerce and Navigation of the United States," 1906.

It will be noted, moreover, that with the exception of the clearances from New Orleans the percentage of the tonnage credited to the American vessels was higher for sailing vessels than for steamers in the case of each of the six ports named in Table 35.

The relative rank of the Atlantic and Gulf districts in total of vessels entered and cleared in the foreign trade in 1906 is shown in Table 36. Taking the two districts together the aggregate tonnage of American vessels entered was 2,630,072, the figures for clearances being 2,672,794. The tonnage of all vessels entered at the Atlantic ports formed 79.9 per cent of the total tonnage for the entrances at the Atlantic and Gulf ports, and the clearances of the Atlantic ports were 78.9 per cent of the corresponding aggregate.

TABLE 36.—VESSELS ENTERED AND CLEARED IN THE FOREIGN TRADE: 1906.[1]

DISTRICT AND CLASS OF VESSEL.	ENTRANCES AND CLEARANCES COMBINED.			ENTERED.							CLEARED.						
	Aggregate.		Per cent tonnage of American vessels forms of total.	Total.		American vessels.		Foreign vessels.		Per cent tonnage of American vessels forms of total.	Total.		American vessels.		Foreign vessels.		Per cent tonnage of American vessels forms of total.
	Number.	Tonnage.		Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.		Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.	
Atlantic and Gulf districts	28,768	48,476,711	10.9	14,343	24,345,505	2,482	2,630,072	11,861	21,715,433	10.8	14,425	24,131,206	2,582	2,672,794	11,843	21,458,412	11.1
Atlantic district	21,052	38,486,520	10.9	10,486	19,449,990	1,642	2,030,604	8,844	17,419,386	10.4	10,566	19,036,530	1,878	2,176,894	8,688	16,859,636	11.4
Sailing	6,379	2,104,073	34.5	3,049	966,463	868	281,656	2,181	684,807	29.1	3,330	1,137,610	1,091	444,171	2,239	693,439	39.0
Steam	14,673	36,382,447	9.6	7,437	18,483,527	774	1,748,948	6,663	16,734,579	9.4	7,236	17,898,920	787	1,732,723	6,449	16,166,197	9.7
Gulf district	7,716	9,990,191	11.0	3,857	4,895,515	840	599,468	3,017	4,296,047	12.2	3,859	5,094,676	704	495,900	3,155	4,598,776	9.7
Sailing	1,906	977,122	27.0	1,013	536,977	414	184,505	599	352,472	34.4	893	440,145	282	79,173	611	360,972	18.0
Steam	5,810	9,013,069	9.2	2,844	4,358,538	426	414,963	2,418	3,943,575	9.5	2,966	4,654,531	422	416,727	2,544	4,237,804	9.0

[1] Bureau of Statistics, Department of Commerce and Labor, "Commerce and Navigation of the United States," 1906.

The relation of sail to steam tonnage in the foreign trade of the Atlantic and Gulf ports is brought out clearly in Table 36. In both entrances and clearances for each district the percentage of the tonnage of American vessels was much higher for sailing vessels than for steamers. Of the entrances at Gulf ports and the clearances from Atlantic cities, over 34 per cent of the total tonnage of sailing vessels was American. In the case of steam tonnage, less than one-tenth of the total was American. It is a well-known fact that steamships are steadily supplanting sailing vessels in ocean transportation, and that the American deep-sea marine is gradually being changed from one in which sailing vessels predominate to one in which steamers are mainly employed. The transformation, however, is still incomplete. The sailing vessels are used to a larger extent by Americans than by foreigners. One reason why the registered tonnage of the American marine does not increase more rapidly is to be found in the relatively

large place held in that marine by the sailing vessel, a type of ship that is steadily being abandoned in favor of the steamer.

PASSENGERS.

The total number of passengers carried coastwise on the Atlantic and Gulf increased 71.9 per cent from 1889 to 1906.

TABLE 37.—*Number of passengers: 1906 and 1889.*

CLASS OF PASSENGERS.	1906	1889	Per cent of increase.
Total	292,555,416	170,225,458	71.9
Ferry	272,596,670	158,644,012	71.8
All other	19,958,746	11,581,446	72.3

This traffic consists of two distinct classes of passengers—those carried on the ferries and those carried by passenger steamers operated from port to port. There has been a steady increase in the port to port traffic as the result of the establishment of new lines of coastwise steamers and the development of long-established services, the port to port traffic having risen 72.3 per cent. The great volume of passenger traffic is carried by the ferries. Less than 20,000,000 passengers were carried from port to port in 1906, while the number of ferry passengers was more than 272,000,000.

The United States Steamboat Inspection Service keeps a record of the number of passengers carried on enrolled steamers, and their reports show the passenger traffic centering in each of the principal ports.

TABLE 38.—*Passengers reported for each district of the United States Steamboat Inspection Service on the Atlantic coast and Gulf of Mexico: 1906.*[1]

LOCAL INSPECTION DISTRICT.	Number of passengers.
Total	291,053,505
Albany, N. Y.	3,840,186
Apalachicola, Fla.	164,716
Baltimore, Md.	3,702,873
Bangor, Me.	804,230
Boston, Mass.	17,665,329
Charleston, S. C.	616,782
Galveston, Tex.	56,992
Jacksonville, Fla.	538,738
Mobile, Ala.	175,388
New Haven, Conn.	743,999
New London, Conn.	1,335,745
New Orleans, La.	4,030,718
New York, N. Y.	213,575,838
Norfolk, Va.	5,964,799
Philadelphia, Pa.	32,228,294
Portland, Me.	2,372,900
Providence, R. I.	2,785,293
Savannah, Ga.	450,685

[1] Annual report of the Steamboat Inspector-General.

The total number of passengers reported by the Steamboat Inspection Service in 1906 differs slightly from the total reported by the Census, but the discrepancy is no greater than might be expected as a result of the fact that the information was obtained from various sources and the figures were collected at different times. The great importance of New York as the center of the coastwise passenger traffic is such that, according to the report of the Steamboat Inspector-General, 73.4 per cent of the total for the Atlantic and Gulf coasts is credited to this city in 1906. The enormous traffic centering at New York is made up mainly of ferry passengers, although that city is also the chief center of the port to port passenger business. On account of the ferry traffic across the Delaware river, Philadelphia ranked next to New York in the number of passengers carried, the traffic at this port being 11.1 per cent of the total. Boston came third, with 6.1 per cent, and Norfolk and New Orleans were fourth and fifth, respectively, in volume of traffic.

IDLE VESSELS.

The Census figures for number and tonnage of vessels include only such vessels as were used to some extent during the year 1906. The vessels that were not in service at any time during the year were considered as idle vessels.

TABLE 39.—*Idle vessels: 1906.*

CLASS.	Number of vessels.	Gross tonnage.	Value of vessels.
Total	1,074	87,254	$6,895,147
Steam	450	49,131	5,801,871
Sail	475	11,971	780,405
Unrigged	149	26,152	312,871

The idle vessels were mostly small craft, the average tonnage being only 81.2 tons. Over two-fifths of the total number of idle vessels consisted of steamers, the value of which was 84.1 per cent of the total.

VESSELS OPERATED AND TRAFFIC CARRIED BETWEEN PORTO RICAN PORTS.

The data concerning transportation by water in the United States in 1906 do not include the statistics for vessels operated locally at Porto Rico, but Table 40 presents information regarding such vessels and the volume of the local coastwise traffic of the island.

TABLE 40.—*Vessels operating locally at Porto Rico: 1906.*

	Total.	Steam.	Sail.	Unrigged.
Number of vessels	205	4	43	158
Gross tonnage	5,566	94	905	4,567
Value of vessels	$180,519	$29,200	$43,175	$108,144
Gross income	$227,031	$7,600	$42,258	$177,173
Number of employees	603	16	132	455
Wages	$121,533	$5,381	$24,861	$91,291
Number of passengers carried	2,400	.....	2,400	.....
Freight carried (net tons)	24,120	.....	24,120	.....

Commerce between the United States and Porto Rico is now limited by our coastwise laws to American vessels, and the local coastwise traffic of the island is also restricted to American shipping. The local fleet, in

addition to providing transportation for the home markets, collects and distributes the traffic carried by the lines of steamers plying between Porto Rico and the Atlantic ports.

CONGRESSIONAL APPROPRIATIONS.

The appropriations by Congress for the improvement of the rivers and harbors of the Atlantic and Gulf coasts have extended over a period of more than one hundred years. The expenditures have been devoted to a large number of localities and streams, and the list of laws by which the appropriations have been made is lengthy. The total appropriations for each state of the Atlantic slope and coast are shown in Table 41, and for each state of the Gulf slope and coast in Table 42, while the appropriations in detail for each river and harbor are shown in Tables 43 and 44. These tables were compiled from House Document 421, Fifty-seventh Congress, second session, from the report of the Chief of Engineers for the fiscal year ending June 30, 1906, and from the rivers and harbors act of March 2, 1907. They constitute an extremely valuable compilation, showing precisely how the expenditures for the improvement of the Atlantic and Gulf harbors and streams have been distributed.

TABLE 41.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and states.*

LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS.			
		Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Total	1802	$141,162,891	$56,448,541	$73,821,826	$10,892,524
Maine	1821	5,832,574	2,715,774	2,791,800	325,000
New Hampshire	1829	710,271	484,560	225,711	.....
Massachusetts	1823	14,619,077	5,093,703	8,479,641	1,045,733
Rhode Island	1827	5,234,433	1,538,950	3,216,149	479,334
Connecticut	1821	5,240,054	2,783,028	2,000,526	456,500
New York	1829	25,454,730	9,771,543	13,327,877	2,355,310
New Jersey	1829	4,184,018	1,913,038	1,433,730	837,250
Pennsylvania	1870	588,000	499,750	88,250	.....
Delaware	1822	6,953,755	3,533,490	3,252,465	167,830
District of Columbia	1849	3,585,500	2,163,500	1,037,000	385,000
Maryland	1828	8,717,313	4,583,813	3,487,990	645,510
Virginia	1829	7,414,000	3,488,380	3,173,566	752,054
North Carolina	1826	6,497,872	4,096,809	1,923,500	477,563
South Carolina	1836	8,730,575	3,035,500	5,392,785	302,290
Georgia	1826	10,590,938	2,884,172	7,097,116	609,650
Florida	1829	5,755,320	1,352,570	3,462,250	940,500
Miscellaneous	1802	21,054,461	6,509,991	13,431,470	1,113,000

TABLE 42.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Gulf of Mexico, by periods and states.*

LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS.			
		Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Total	1826	$64,292,362	$21,065,470	$38,027,940	$5,198,952
Georgia	1874	315,456	202,300	88,156	25,000
Florida	1828	4,176,785	939,880	2,764,074	472,831
Alabama	1826	6,124,631	2,264,331	3,410,300	450,000
Mississippi	1827	2,056,207	463,819	1,071,888	520,500
Louisiana	1829	20,583,913	8,508,462	10,619,659	1,455,792
Texas	1852	23,249,419	6,579,902	15,055,688	1,613,829
Miscellaneous	1833	7,785,951	2,106,776	5,018,175	661,000

Of the total amount appropriated for the Atlantic and Gulf improvements, $127,941,242, or 62.3 per cent, has been granted since 1890. As would be expected, the states having the most important harbors have received the largest amounts. New York leads the list with total appropriations of $25,454,730, 61.6 per cent of which has been granted since 1890. The amount received for developing ports along the lengthy seaboard of Texas causes that state to rank next to New York in the amount of public funds appropriated. Considerably over one-half of the total expenditures in Texas have been devoted to providing Galveston with a harbor and channel of approach.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities.*

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS.			
		Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Total	1802	$141,162,891	$56,448,541	$73,821,826	$10,892,524
Maine	1821	5,832,574	2,715,774	2,791,800	325,000
Bagaduce river	1888	28,000	7,000	21,000	.....
Bar Harbor breakwater	1888	220,000	100,000	90,000	30,000
Belfast harbor	1826	62,200	36,200	26,000	.....
Bucksport harbor	1902	20,000	.....	20,000	.....
Camden harbor	1873	82,400	41,000	41,400	.....
Cape Porpoise harbor	1899	126,000	.....	80,000	46,000
Carvers harbor	1896	45,000	.....	45,000	.....
Cathance river	1880	21,000	21,000	.....	.....
Cobscook bay	1836	5,300	5,300	.....	.....
Damariscotta river	1905	5,000	.....	5,000	.....
Georges river	1896	26,000	.....	26,000	.....
Harraseeket river	1890	31,000	10,000	21,000	.....
Isles of Shoals (Gosport harbor)	1821	44,000	14,000	30,000	.....
Kennebec river	1827	641,445	306,445	260,000	75,000
Kennebunk river	1829	88,675	85,175	3,500	.....
Lubeck channel	1879	319,000	169,000	150,000	.....
Machias river	1873	32,000	32,000	.....	.....
Matinicus Island harbor	1852	1,000	1,000	.....	.....
Moosabec bar	1881	114,000	70,000	44,000	.....
Narraguagus river	1871	72,000	49,500	22,500	.....
New harbor	1905	10,500	.....	10,500	.....
Owlshead harbor	1836	17,902	17,902	.....	.....
Penobscot river	1829	506,300	308,300	68,000	130,000
Piscataqua river	1826	8,450	8,450	.....	.....
Pleasant river	1890	3,500	3,500	.....	.....
Portland harbor	1836	1,463,727	622,727	841,000	.....
Richmond Island harbor	1852	120,000	120,000	.....	.....
Rockland harbor	1880	925,500	190,000	735,500	.....
Rockport harbor	1888	15,000	15,000	.....	.....
Royal river	1871	30,000	30,000	.....	.....
Saco river and breakwater	1827	340,775	296,775	50,000	.....
St. Croix river	1867	5,000	5,000	.....	.....
Sasanoa river[1]	1870	108,500	45,500	19,000	44,000
Sullivan Falls and river	1871	50,000	35,000	15,000	.....
Union river	1870	175,000	30,000	145,000	.....
Wells harbor	1872	5,000	5,000	.....	.....
York harbor	1886	57,400	35,000	22,400	.....
New Hampshire	1829	710,271	484,560	225,711	.....
Bellamy river	1888	35,000	20,000	15,000	.....
Cocheco river	1829	311,771	195,060	116,711	.....
Exeter river	1880	54,000	35,000	19,000	.....
Lamprey river	1881	20,000	20,000	.....	.....
Little harbor of refuge	1886	145,000	70,000	75,000	.....
Portsmouth harbor	1879	137,000	137,000	.....	.....
Winnepesaukee Lake	1880	7,500	7,500	.....	.....
Massachusetts	1823	14,619,077	5,093,703	8,479,641	1,045,733
Bass river	1829	20,150	20,150	.....	.....
Beverly harbor	1902	48,500	.....	10,000	38,500
Boston harbor	1825	7,947,947	2,444,196	4,953,751	550,000
Buzzards bay	1905	2,500	.....	2,500	.....
Canapitsit channel	1892	9,800	.....	9,800	.....
Chatham harbor[2]	1890	13,733	5,000	8,733	.....
Cohasset harbor	1902	10,000	.....	10,000	.....

[1] Shown as Bath gut in 1890.
[2] Shown as Stage harbor in 1890.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Massachusetts—Cont'd.					
Dorchester bay and Neponset river	1907	$125,233			$125,233
Duxbury harbor	1836	37,000	$25,000	$12,000	
East Dennis breakwater	1852	1,500	1,500		
Essex river	1892	30,000		25,000	5,000
Fall River harbor	1874	205,412	30,000	175,412	
Gloucester harbor	1823	502,083	46,000	456,083	
Hingham harbor	1875	39,000	26,000	3,000	10,000
Hyannis harbor of refuge	1826	198,794	151,932	46,862	
Ipswich river	1886	7,500	5,000	2,500	
Kingston harbor	1892	10,000		10,000	
Little harbor	1905	18,000		18,000	
Lynn harbor	1882	291,437	91,000	200,437	
Malden river	1882	80,000	10,000	40,000	30,000
Manchester harbor	1888	24,300	7,500	16,800	
Marblehead harbor and Holmes hole	1825	1,900	900	1,000	
Marthas Vineyard harbor [1]	1829	29,500	24,500	5,000	
Merrimac river	1828	375,367	248,867	126,500	
Mystic river	1892	155,000		125,000	30,000
Nantucket harbor of refuge	1828	433,335	215,835	175,000	42,500
New Bedford harbor	1836	270,700	53,000	117,700	100,000
Newburyport harbor	1880	398,500	257,500	141,000	
Plymouth harbor	1824	280,082	178,582	101,500	
Powow river	1888	51,000	8,000	43,000	
Provincetown harbor	1826	225,828	190,328	30,500	5,000
Salem harbor	1873	65,000	39,000	26,000	
Sandy bay (Rockport harbor of refuge)	1829	1,719,233	519,233	1,100,000	100,000
Scituate harbor	1829	104,680	63,680	41,000	
Taunton river	1870	198,000	164,000	34,000	
Town river	1896	37,577		37,577	
Vineyard Haven harbor	1888	60,000	35,000	25,000	
Wareham harbor	1872	96,236	89,000	7,236	
Wellfleet harbor	1872	16,000	16,000		
Westport harbor and river	1886	3,000	2,000	1,000	
Weymouth harbor and river	1890	122,250	10,000	102,750	9,500
Winthrop harbor	1888	9,000	6,000	3,000	
Woods Hole channel	1852	344,000	109,000	235,000	
Rhode Island	1827	5,234,433	1,538,950	3,216,149	479,334
Block Island harbor of refuge	1870	521,000	375,000	126,000	20,000
Block Island, Great Salt pond	1896	200,000		170,000	30,000
Churches Cove harbor	1827	28,200	28,200		
Coasters Harbor island	1890	5,500	5,500		
Greenwich Bay harbor	1890	2,000	2,000		
Newport harbor	1873	330,300	133,000	112,300	85,000
Pawtucket river	1867	501,584	197,000	169,000	135,584
Point Judith, harbor of refuge	1890	1,650,000	75,000	1,475,000	100,000
Point Judith pond, entrance	1892	20,000		12,000	8,000
Potonomuth river	1881	5,000	5,000		
Providence river and harbor	1852	[2] 1,874,549	703,250	1,080,549	90,750
Sakonnet Point harbor	1899	35,000		25,000	10,000
Sakonnet river	1896	40,000		40,000	
Warren river	1886	5,000	5,000		
Wickford harbor	1873	16,300	10,000	6,300	
Connecticut	1821	5,240,054	2,783,028	2,000,526	456,500
Black Rock harbor	1836	72,550	61,550	11,000	
Branford harbor	1902	13,000		8,000	5,000
Bridgeport harbor	1836	663,500	260,000	290,500	113,000
Clinton harbor	1882	8,500	6,500	2,000	
Connecticut river	1836	729,511	[3] 520,511	164,000	45,000
Coscob harbor and Mianus river	1892	19,000		19,000	
Duck Island harbor of refuge	1890	120,202	25,000	95,202	
East Norwalk harbor	1907	63,500			[4] 63,500
Fivemile River harbor	1888	103,000	10,000	23,000	[5] 70,000
Greenwich harbor	1896	21,767		21,767	([6])
Housatonic river	1871	272,450	143,500	108,950	20,000
Milford harbor	1872	72,100	47,100	25,000	
Mystic river	1890	36,600	10,000	26,600	

[1] Shown as Edgartown harbor in 1890.
[2] Includes appropriations for Green Jacket shoal.
[3] Includes appropriations for Saybrook harbor.
[4] Includes appropriations for South Norwalk harbor.
[5] Includes appropriations for harbors at Stamford, Southport, Greenwich, and Westport, and Saugatuck river.
[6] Included with appropriations for Fivemile River harbor.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Connecticut—Continued.					
New Haven harbor	1852	$634,074	$291,000	$333,074	$10,000
New Haven Harbor breakwater	1879	979,000	490,000	389,000	100,000
New London harbor	1880	166,800	19,800	147,000	
Norwalk harbor	1829	134,913	83,080	51,833	
Southport harbor	1829	48,976	[7] 31,087	17,889	([6])
Stamford harbor	1829	89,211	20,100	69,111	([6])
Stonington harbor	1827	337,454	314,954	22,500	
Thames river	1821	527,900	374,300	123,600	30,000
Westbrook harbor	1829	130	[8] 130		
West river	1905	38,500		38,500	
Westport harbor and Saugatuck river and harbor	1826	32,416	[9] 19,416	13,000	([6])
Wilsons Point harbor	1888	55,000	55,000		
New York	1829	25,454,730	9,771,543	13,327,877	2,355,310
Bronx river	1896	79,500		56,500	23,000
Browns creek	1890	36,000	12,000	19,000	5,000
Canarsie Bay harbor	1880	197,500	48,000	24,500	[10] 125,000
East Chester creek	1873	115,500	69,000	40,500	6,000
East river and Hell Gate	1852	5,255,700	4,130,700	[11] 875,000	250,000
Echo Bay and New Rochelle harbor	1878	94,175	65,175	17,000	12,000
Flushing Bay harbor	1879	135,000	105,000	30,000	([12])
Glencove harbor	1888	72,000	35,000	37,000	
Great South bay [13]	1890	110,000	15,000	93,000	2,000
Greenport harbor	1882	46,000	35,000	11,000	
Harlem river	1875	1,555,000	730,000	675,000	150,000
Hudson river	1834	5,451,745	1,725,538	3,476,207	250,000
Huntington harbor	1872	57,000	32,500	24,500	([12])
Jamaica bay	1892	9,460		9,460	
Larchmont harbor	1890	84,000	5,000	65,000	14,000
Mamaroneck harbor	1882	40,000	15,000	25,000	
Mattituck harbor	1896	35,000		35,000	([12])
Newtown creek	1880	420,900	142,500	273,400	5,000
New York harbor	1868	10,999,700	2,245,280	7,292,610	[14] 1,461,810
Peconic river	1871	25,000	25,000		
Peekskill harbor	1896	31,500		25,500	[15] 6,000
Port Chester harbor	1872	91,500	37,000	48,000	6,500
Port Jefferson harbor	1852	159,100	105,200	53,900	([12])
Rondout harbor	1872	139,300	105,500	33,800	([16])
Sag Harbor harbor	1829	29,650	150	29,500	([12])
Saugerties harbor	1884	105,000	42,000	43,000	20,000
Sheepshead bay	1880	26,000	26,000		
Sumpawanus inlet	1881	7,000	7,000		
Tarrytown harbor	1905	26,000		10,000	16,000
Wappinger creek	1890	20,500	13,000	4,500	3,000
New Jersey	1829	4,184,018	1,913,038	1,433,730	837,250
Alloway creek	1890	29,000	6,000	18,000	5,000
Atlantic City harbor	1886	5,000	5,000		
Cheesequake creek	1880	46,000	40,000	6,000	([17])
Cohansey river	1873	91,800	36,000		55,800
Cold Spring inlet	1907	311,000			311,000
Cooper creek	1896	37,000		37,000	
Cranberry inlet	1852	1,000	1,000		
Crow shoal	1836	1,000	1,000		
Dennis creek	1896	5,000		5,000	
Elizabeth river	1879	50,160	32,000	18,160	([17])
Flat Beach	1829	100	100		
Goshen creek	1892	17,000		17,000	
Keyport harbor	1882	128,475	30,475	30,000	[18] 68,000
Little Egg harbor	1836	23,500	23,500		
Manasquan river	1879	[19] 46,000	41,000	5,000	
Mantua creek	1882	97,450	3,000	60,000	34,450
Matawan creek	1881	51,120	23,500	27,620	([17])
Maurice river	1882	43,000	43,000		
Newark bay	1852	212,000	12,000		200,000
Passaic river	1872	878,750	378,750	447,000	53,000
Raccoon creek	1882	48,000	3,000	30,000	15,000
Rahway river	1879	37,000	37,000		
Rancocas river	1881	45,000	30,000	15,000	
Raritan bay	1881	562,500	222,500	315,000	25,000
Raritan river	1836	727,213	[20] 585,213	142,000	([17])
Salem river	1871	47,700	14,500	4,200	29,000
Shoal harbor and Compton creek	1890	37,000	5,000	32,000	([17])
Shrewsbury river	1852	379,500	224,500	145,000	10,000

[7] Includes $10,587 shown for Mill river in 1890.
[8] For survey.
[9] Includes $1,000 shown for Cedar Point beach in 1890.
[10] Includes appropriations for harbors at Port Jefferson, Mattituck, Huntington, Flushing Bay, and Sag Harbor.
[11] Includes $40,000 appropriated for Wallabout channel.
[12] Included with appropriation for Canarsie Bay harbor.
[13] Shown as Patchogue river in 1890.
[14] Includes appropriation for two suction dredges.
[15] Includes appropriation for Rondout harbor.
[16] Included with appropriation for Peekskill harbor.
[17] Included with appropriation for Keyport harbor.
[18] Includes appropriations for Elizabeth, Raritan, and South rivers, Cheesequake and Matawan creeks, and Shoal harbor and Compton creek.
[19] Includes $2,000 shown for Squan river in 1890.
[20] Includes $13,963 shown for New Brunswick harbor in 1890.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
New Jersey—Continued.					
South river	1871	$123,000	$91,000	$32,000	[1]
Tuckerton creek	1902	36,000	.....	24,000	$12,000
Woodbridge creek	1879	61,750	19,000	23,750	19,000
Woodbury creek	1882	5,000	5,000	.....	.....
Pennsylvania	1870	588,000	499,750	88,250	.....
Chester creek	1881	6,000	6,000	.....	.....
Frankford creek	1882	12,000	10,000	2,000	.....
Schuylkill river	1870	525,000	438,750	86,250	.....
Susquehanna river, North branch	1880	45,000	45,000	.....	.....
Delaware	1822	6,953,755	3,533,490	3,252,465	167,830
Appoquinimink river	1880	50,500	5,000	32,500	[2] 13,000
Broad Creek river	1880	41,500	25,000	15,000	1,500
Broadkill river	1873	68,330	35,000	.....	33,330
Delaware bay, harbor of refuge	1896	2,239,334	.....	2,239,334	.....
Delaware Bay breakwater	1822	2,833,354	2,653,354	180,000	.....
Delaware Bay ice harbor	1882	25,000	25,000	.....	.....
Indian river	1882	10,000	10,000	.....	.....
Lewes, pier at	1870	386,160	378,500	7,660	.....
Mispillion river	1879	118,650	17,000	61,650	40,000
Murderkill river	1902	40,360	.....	40,360	([3])
St. Jones river[4]	1881	62,150	40,000	19,150	3,000
Smyrna river	1880	72,965	[5] 25,000	45,965	2,000
Wilmington harbor	1836	1,005,452	319,606	610,846	75,000
District of Columbia	1849	3,585,500	2,163,500	1,037,000	385,000
Anacostia river	1890	299,000	20,000	152,000	127,000
Potomac river	1849	[6] 3,286,500	2,143,500	885,000	258,000
Maryland	1828	8,717,313	4,583,813	3,487,990	645,510
Annapolis harbor	1880	10,000	10,000	.....	.....
Baltimore harbor and Patapsco river	1836	[7] 6,602,530	2,911,830	3,184,200	506,500
Battery Island piers	1886	17,775	17,775	.....	.....
Breton Bay harbor[8]	1878	49,500	37,500	12,000	.....
Cambridge harbor	1871	116,358	42,500	13,858	[9] 60,000
Chesapeake and Ohio canal	1828	1,000,000	1,000,000	.....	.....
Chesapeake Bay headwaters	1836	500	500	.....	.....
Chester river	1873	61,847	46,000	15,847	([10])
Choptank river	1880	70,885	45,000	25,885	([10])
Claiborne harbor	1902	16,863	.....	16,863	([10])
Corsica creek	1882	30,000	30,000	.....	.....
Crisfield harbor	1875	75,025	37,318	.....	37,707
Deal Island passage	1881	10,000	10,000	.....	.....
Elk river	1874	83,968	41,500	23,665	18,803
Fairlee creek	1889	10,000	10,000	.....	.....
La Trappe river	1892	9,117	.....	9,117	.....
Manokin river	1890	29,272	7,500	21,772	([10])
Northeast river	1872	20,640	18,000	2,640	.....
Patuxent river	1888	14,000	11,000	3,000	.....
Pocomoke river	1878	35,043	20,500	14,543	([10])
Queenstown harbor	1871	35,606	14,000	21,606	([10])
Rockhall harbor	1896	41,429	.....	41,429	([10])
St. Jeromes creek	1881	26,500	26,500	.....	.....
Susquehanna river	1852	210,890	162,390	28,500	20,000
Tred Avon river	1880	6,000	6,000	.....	.....
Tyaskin creek	1902	10,158	.....	10,158	([10])
Warwick river[11]	1880	23,909	6,000	17,909	([10])
Wicomico river	1872	87,498	60,000	24,998	2,500
Worton harbor	1872	12,000	12,000	.....	.....
Virginia	1829	7,414,000	3,488,380	3,173,566	752,054
Accotink creek	1872	5,000	5,000	.....	.....
Appomattox river	1852	745,830	431,250	264,580	50,000
Aquia creek	1872	33,000	20,500	12,500	.....
Archers Hope river	1881	10,000	10,000	.....	.....
Blackwater river	1878	22,000	14,000	.....	8,000
Cape Charles City harbor	1890	125,000	25,000	75,000	25,000

[1] Included with the appropriation for Keyport harbor.
[2] Includes appropriation for Murderkill river.
[3] Included with appropriation for Appoquinimink river.
[4] Shown as Jones river in 1890.
[5] Included $20,000 shown for Duck creek in 1890.
[6] Includes all appropriations for the improvement of this river.
[7] Includes appropriations for Curtis Bay channel and harbor at Southwest Baltimore (Spring Garden).
[8] Shown as Leonardtown harbor in 1890.
[9] Includes appropriations for Claiborne, Queenstown, and Rockhall harbors, Chester, Choptank, La Trappe, Manokin, Pocomoke and Warwick rivers, and Tyaskin creek.
[10] Included with appropriation for Cambridge harbor.
[11] Shown as Secretary creek in 1890.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Virginia—Continued.					
Carters creek	1902	$19,588	.....	$19,588	([12])
Chickahominy river	1878	29,000	$24,000	5,000	.....
Elizabeth river	1829	85,080	40,080	45,000	.....
Hampton river	1878	22,000	22,000	.....	.....
Hampton roads	1902	237,500	.....	225,000	$12,500
James river	1836	2,645,500	1,375,500	1,070,000	200,000
Jamestown Island	1894	40,000	.....	40,000	.....
Lower Machadoc creek	1892	11,000	.....	11,000	.....
Mattaponi river	1880	36,100	19,300	16,800	([12])
Milford Haven harbor	1899	17,500	.....	17,500	.....
Nandua creek	1896	7,500	.....	7,500	.....
Nansemond river	1873	92,000	57,000	30,000	5,000
Neabsco creek	1881	5,000	5,000	.....	.....
Nomini creek	1873	79,000	42,500	31,500	5,000
Norfolk harbor	1876	[13] 2,166,282	852,500	993,957	319,825
Nottoway river	1880	7,000	7,000	.....	.....
Occoquan creek	1870	58,571	35,000	23,571	([12])
Onancock harbor	1879	20,511	14,000	6,511	.....
Pagan river	1880	20,870	10,000	10,870	.....
Pamunkey river	1880	29,900	18,500	11,400	([12])
Rappahannock river	1852	438,229	217,500	143,000	77,729
Staunton river	1879	52,500	52,500	.....	.....
Totusky river	1880	10,000	10,000	.....	.....
Urbana creek	1879	43,500	21,500	22,000	.....
York river	1880	299,039	158,750	91,289	[14] 49,000
North Carolina	1826	6,497,872	4,096,809	1,923,500	477,563
Albemarle Sound to Atlantic ocean waterway[15]	1852	50,000	50,000	.....	.....
Beaufort harbor	1836	[16] 225,000	180,000	21,000	24,000
Beaufort inlet	1905	[17] 250,000	.....	45,000	205,000
Black river	1886	22,500	3,000	19,500	([18])
Cape Fear river and Northeast branch	1829	4,311,979	2,746,479	1,391,500	[19] 174,000
Cape Lookout, harbor of refuge	1899	5,000	.....	5,000	.....
Contentnia creek	1881	75,000	52,000	21,000	2,000
Edenton harbor and bay	1878	23,000	17,000	6,000	.....
Fishing creek	1890	25,250	10,000	15,250	.....
Lillington river	1881	6,000	6,000	.....	.....
Lockwood Folly river	1890	18,000	5,000	13,000	.....
Mackeys creek	1890	15,000	15,000	.....	.....
Meherrin river	1882	11,000	5,000	.....	6,000
Neuse river	1878	369,500	267,500	72,000	[20] 30,000
New river	1836	[21] 158,000	113,000	28,000	17,000
Ocracoke inlet	1826	238,750	223,750	15,000	.....
Pamlico and Tar rivers	1836	188,063	93,000	83,500	11,563
Pasquotank river	1829	7,080	3,080	4,000	.....
Perquimans river	1876	13,750	2,500	11,250	.....
Roanoke river	1871	241,000	138,000	100,000	3,000
Scuppernong river	1878	25,000	8,000	15,000	2,000
Shallotte river	1907	3,000	.....	.....	3,000
Town creek	1881	9,500	1,000	8,500	.....
Trent river	1879	99,500	55,500	44,000	([22])
Yadkin river	1879	107,000	102,000	5,000	.....
South Carolina	1836	8,730,575	3,035,500	5,392,785	302,290
Ashepoo river	1872	1,300	1,300	.....	.....
Ashley river	1880	5,500	5,500	.....	.....
Beaufort river	1890	33,000	12,500	20,500	.....
Charleston harbor	1852	4,800,200	2,352,200	2,423,000	25,000
Charleston to McClellanville, inland waterway	1902	125,290	.....	50,000	75,290
Clarkes creek and Lynchs river	1888	9,500	5,000	2,500	2,000
Congaree river	1886	437,000	20,000	267,000	[23] 150,000
Edisto river	1882	33,785	26,000	7,785	.....
Georgetown harbor	1836	48,500	36,500	12,000	.....
Great Pedee river	1880	224,000	79,500	124,500	20,000
Little Pedee river	1888	24,700	10,000	14,700	([24])

[12] Included with appropriation for York river.
[13] Includes appropriation for $20,000 for a waterway from Norfolk harbor to Atlantic ocean.
[14] Includes appropriations for Mattaponi and Pamunkey rivers, and Carters and Occoquan creeks.
[15] Shown as Croatan Sound in 1890.
[16] Includes appropriations for waterway between Beaufort and Newbern.
[17] Includes appropriations for waterway from Pamlico sound to Beaufort inlet.
[18] Included with appropriation for Cape Fear river.
[19] Includes appropriation for Black river.
[20] Includes appropriation for Trent river.
[21] Includes appropriations for waterways between Beaufort and New river, and New river and Swansboro.
[22] Included with appropriation for Neuse river.
[23] Includes appropriations for Santee and Wateree rivers, and Estherville-Minim creek canal.
[24] Included with appropriation for Waccamaw river shown under miscellaneous.

TABLE 43.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Atlantic coast, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
South Carolina—Cont'd.					
Mingo creek	1888	$17,300	$10,000	$7,300	
Salkahatchie river	1882	18,000	18,000		
Santee river	1881	314,750	129,750	185,000	[1]
Town creek and Stono river	1870	7,500	7,500		
Wappoo cut	1881	[2]120,500	43,000	77,500	
Wateree river	1881	97,500	60,000	37,500	[1]
Winyah bay	1886	2,412,250	218,750	2,163,500	$30,000
Georgia	1826	10,590,938	2,884,172	7,097,116	609,650
Altamaha river	1881	200,000	80,000	70,000	[3]50,000
Brunswick harbor	1836	891,650	172,500	572,500	146,650
Club and Plantation creeks	1907	20,000			20,000
Darien harbor	1878	[4]271,366	33,000	238,366	
Jekyl creek	1888	24,000	12,500	11,500	
Ocmulgee river	1876	350,500	109,500	216,000	25,000
Oconee river	1878	168,750	70,000	98,750	[5]
Romerly marsh	1882	42,109	42,109		
St. Augustine creek	1879	5,000	5,000		
Savannah harbor	1826	7,999,563	2,204,563	5,495,000	300,000
Savannah river	1880	563,000	155,000	375,000	33,000
Skidaway narrows	1905	55,000		20,000	35,000
Florida	1829	5,755,320	1,352,570	3,462,250	940,500
Biscayne bay	1899	416,500		316,500	100,000
Fernandina harbor	1874	139,000	[6]24,000		115,000
Indian river	1844	86,500	6,500	71,000	9,000
Key West harbor	1882	712,500	92,500	420,000	200,000
Oklawaha river	1835	49,000	20,000	14,000	15,000
Orange river	1902	5,000		2,000	[7]3,000
St. Augustine harbor	1829	104,570	88,570	16,000	
St. Johns river	1852	4,203,250	1,095,000	2,611,750	496,500
Volusia bar	1880	39,000	26,000	11,000	2,000
Miscellaneous	1802	21,054,461	6,509,991	13,431,470	1,113,000
Alexandria canal	1837	300,000	300,000		
Atlantic ocean to Great Lakes, survey	1895	495,000		495,000	
Atlantic ocean to Gulf of Mexico	1826	50,400	50,400		
Chesapeake and Delaware Bay canal	1881	25,000	20,000	5,000	
Chesapeake and Delaware canal	1825	450,000	450,000		
Chesapeake bay and Charleston, S. C.	1837	10,000	10,000		
Chincoteague bay to Delaware bay, inland waterway	1886	193,750	118,750	75,000	
Cumberland Sound	1880	3,387,500	592,500	2,720,000	75,000
Dan river	1880	50,500	50,500		
Delaware river	1802	[8]9,665,841	2,868,841	5,852,000	945,000
Dismal Swamp canal	1826	230,000	230,000		
Dismal Swamp canal and N. C. Sound	1894	5,000		5,000	
Little Narragansett bay	1876	36,000	36,000		
Lumber river	1888	19,000	10,000	9,000	
Nanticoke river	1886	25,000	10,000	13,000	2,000
New river	1876	112,000	112,000		
Norfolk and Albemarle Sound through Currituck Sound	1878	237,900	152,500	82,400	3,000
Norfolk to North Carolina sounds via Pasquotank river	1899	262,870		257,870	5,000
North Landing river	1879	55,500	55,500		
Powcatuck river	1871	175,500	88,600	53,900	33,000
Philadelphia harbor	1888	3,950,000	705,000	3,245,000	
St. Marys to St. Johns river	1828	78,000	78,000		
Savannah to Fernandina	1892	135,000		105,000	30,000
Shenandoah river	1880	17,500	17,500		
Staten Island channel	1874	681,500	216,000	465,500	
Transportation routes to seaboard	1874	210,000	210,000		
Waccamaw river	1880	145,700	77,900	47,800	[9]20,000
General appropriations	1824	50,000	50,000		

[1] Included with appropriation for Congaree river.
[2] Includes appropriations for inland waterway between Charleston and Beaufort.
[3] Includes appropriation for Oconee river.
[4] Includes appropriations for Doboy bar.
[5] Included with appropriation for Altamaha river.
[6] Appropriations for inside passage between Fernandina and St. Johns river.
[7] Includes appropriations for Caloosahatchee river and Charlotte harbor which appear in Table 44.
[8] Includes appropriations for harbors at Newcastle, Port Penn, Chester, Marcushook, and Fort Mifflin.
[9] Includes appropriation for Little Pedee river, South Carolina.

TABLE 44.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Gulf of Mexico, by periods and localities.*

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Total	1826	$64,292,362	$21,065,470	$38,027,940	$5,198,952
Georgia	1874	315,456	202,300	88,156	25,000
Etowah river	1876	1,300	1,300		
Flint river	1874	281,000	175,000	81,000	25,000
Oostanaula and Cossawattee rivers	1874	33,156	26,000	7,156	
Florida	1828	4,176,785	939,880	2,764,074	472,831
Anclote river	1899	20,000		20,000	[1]
Apalachicola Bay harbor	1833	388,850	126,350	177,500	85,000
Apalachicola river	1828	119,750	57,500	37,250	[2]25,000
Blackwater river	1899	20,000		15,000	5,000
Caloosahatchee river	1882	37,100	27,600	9,500	[3]
Carrabelle bar and harbor	1896	129,204		69,204	60,000
Cedar Keys harbor	1872	104,500	104,500		
Charlotte harbor	1881	119,000	48,000	71,000	[4]
Chipola river	1835	20,000	9,000	11,000	[4]
Crystal river	1902	50,000		25,000	[5]25,000
Dredge boats	1899	70,000		70,000	
Hillsboro bay and river	1899	723,350		723,350	
Holmes river	1882	16,000	10,000	4,000	2,000
Kissimmee river	1902	27,221		15,000	12,221
Manatee river	1882	140,052	34,000	35,342	70,710
Ocklocknee river	1833	5,000	5,000		
Pensacola harbor	1878	1,145,957	275,000	770,957	100,000
St. Marks river and harbor	1828	37,530	37,530		
Sarasota bay	1890	55,000	5,000	27,500	22,500
Suwanee river	1839	82,658	56,000	26,658	[1]
Tampa bay	1880	740,013	120,000	620,013	
Yellow river	1839	500	500		
Withlacoochee river	1881	125,100	23,900	35,900	65,400
Alabama	1826	6,124,631	2,264,331	3,410,300	450,000
Alabama river	1878	719,000	185,000	334,000	200,000
Cahaba river	1882	45,000	37,500	7,500	
Mobile bay, harbor, and river	1826	5,316,631	[6]1,997,831	3,068,800	250,000
Tallapoosa river	1882	44,000	44,000		
Mississippi	1827	2,056,207	463,819	1,071,888	520,500
Biloxi bay and harbor	1882	73,000	45,000	19,000	9,000
Bluff creek	1890	1,000	1,000		
Chickasawhay river	1890	23,750	5,000	18,750	[7]
Gulfport-Ship Island harbor channel	1884	261,416	21,194	165,222	75,000
Horn Island pass	1894	145,162		136,162	9,000
Homochitto river	1899	24,000		20,000	4,000
Leaf river	1890	23,000	5,000	18,000	[7]
Noxubee river	1880	62,000	53,000	9,000	
Old Town creek	1882	3,000	3,000		
Pascagoula river and Horn Island harbor	1827	1,093,168	161,500	571,668	[8]360,000
Pearl river	1879	276,711	169,125	74,086	33,500
Ship Island pass	1899	40,000		40,000	
Wolf and Jordan rivers	1907	30,000			30,000
Louisiana	1829	20,583,913	8,508,462	10,619,659	1,455,792
Amite river and Bayou Manchac	1880	42,494	23,800	18,694	[9]
Bogue Chitto	1890	62,000	5,000	23,000	[10]34,000
Calcasieu river and pass	1872	636,500	131,500	480,000	25,000
Chefuncte river and Bogue Falia	1872	18,806	12,500	6,306	[9]
Cortableau bayou	1880	58,700	31,200	27,500	
Delta and passes of the Mississippi river	1829	17,103,606	7,798,062	8,255,544	1,050,000
Franklin - Mermentau inland waterway	1907	89,292			89,292
Johnsons bayou	1899	5,000		2,500	2,500
Lafourche bayou	1852	262,500	132,500	130,000	
Mermentau river	1892	27,915		27,915	[11]
Plaquemine bayou	1888	1,875,000	200,000	1,575,000	100,000

[1] Included with appropriation for Crystal river.
[2] Includes appropriation for Chipola river.
[3] Included with appropriation for Orange river in Table 43.
[4] Included with appropriation for Apalachicola river.
[5] Includes appropriation for Anclote and Suwanee rivers.
[6] Includes appropriation of $18,000 made for Pass au Heron in 1828.
[7] Included with appropriation for Pascagoula river.
[8] Includes appropriations for Chickasawhay and Leaf rivers, and for dredges.
[9] Included with appropriation for Bogue Chitto.
[10] Includes appropriations for Amite, Chefuncte, and Tickfaw rivers, Bayou Manchac, and Bogue Falia.
[11] Included with appropriation for Vermilion bayou.

TABLE 44.—*Congressional appropriations for the survey, improvement, and maintenance of harbors and waterways of the Gulf of Mexico, by periods and localities*—Continued.

STATE AND LOCALITY.	Date of earliest appropriation.	APPROPRIATIONS. Total.	Up to and including 1890.	1891 to 1906, inclusive.	March 2, 1907.
Louisiana—Continued.					
Pontchartrain Lake harbor	1852	$25,000	$25,000	.....	.....
Tangipahoa river	1872	11,500	11,500	.....	.....
Teche bayou	1829	251,700	80,700	$41,000	$130,000
Terrebonne bayou	1880	38,800	38,800	.....	.....
Tickfaw river	1881	14,000	8,000	6,000	[1]
Vermilion bayou	1880	61,100	9,900	26,200	[2] 25,000
Texas	1852	23,249,419	6,579,902	15,055,688	1,613,829
Anahuac channel	1905	6,100	.....	6,100	[3]
Aransas pass and bay	1879	1,296,250	581,250	515,000	200,000
Brazos river	1880	939,243	158,750	595,493	185,000
Brazos-Santiago harbor	1878	253,500	253,500	.....	.....
Cedar bayou	1890	39,250	18,150	21,100	[3]
Colorado river of Texas	1852	20,000	20,000	.....	.....
Double Point bayou	1902	6,953	.....	6,953	.....
Galveston and Brazos canal	1902	69,517	.....	69 517	[3]
Galveston Bay ship channel, Buffalo bayou, and Morgan canal	1872	3,186,247	[4] 877,767	1,908,480	400,000
Galveston harbor	1870	10,523,000	2,778,000	7,445,000	300,000
Galveston harbor to Texas City channel	1899	310,000	.....	250,000	60,000
Galveston sea wall	1904	750,000	.....	750,000	.....
Inland waterway, Texas coast	1907	133,829	.....	.....	133,829
Neches river	1878	33,000	33,000	.....	.....
Pass Cavallo harbor and inlet [5]	1876	327,500	327,500	.....	.....
Port Bolivar channel	1907	50,000	.....	.....	50,000
Rio Grande river	1876	21,735	21,735	.....	.....
Sabine Pass harbor	1852	3,942,750	1,411,750	2,371,000	160,000
Sabine river	1878	50,000	32,000	18,000	.....
Sabine and Neches rivers	1899	546,500	.....	546,500	.....
San Antonio river	1852	1,500	1,500	.....	.....
Surveys	1852	5,000	5,000	.....	.....
Trinity river	1852	651,863	60,000	516,863	75,000
West Galveston Bay channel	1892	85,682	.....	35,682	[6] 50,000
Miscellaneous	1833	7,785,951	2,106,776	5,018,175	661,000
Black Warrior, Warrior, and Tombigbee rivers	1872	4,764,162	818,250	3,565,912	380,000
Chattahoochee river	1835	734,650	247,000	337,650	150,000
Choctawhatchee river	1833	203,300	122,500	70,800	10,000
Coosa river	1876	1,656,359	824,026	782,333	50,000
Escambia and Conecuh rivers	1833	165,500	80,000	39,500	46,000
Flint, Ocmulgee, and Chattahoochee rivers	1852	10,000	10,000	.....	.....
Gulf of Mexico deep water harbor	1889	2,000	2,000	.....	.....
St. Andrews bay to Bon Secours	1894	3,000	3,000	.....	.....
Water hyacinths, removal of	1899	246,980	.....	221,980	25,000

[1] Included with appropriation for Bogue Chitto.
[2] Includes appropriation for Mermentau river.
[3] Included with appropriation for West Galveston Bay channel.
[4] Includes $92,317 paid for Morgan cut and canal.
[5] Shown as Matagorda bay in 1890.
[6] Includes appropriations for Anahuac channel, Cedar bayou, and Galveston and Brazos canal.

Louisiana ranks third mainly on account of the cost of improving the mouth of the Mississippi river, for which work over $17,000,000 have been spent. The appropriations made for the ports and streams of Massachusetts aggregate $14,619,077. The sums expended in Pennsylvania seem especially small, but it will be seen that the appropriations for the Philadelphia harbor, $3,950,000, and for the Delaware river, $9,665,841, are not included in the Pennsylvania appropriations shown in Table 43.

The improvement of Boston harbor has cost $7,947,947 and about $5,500,000 have been spent on the Hudson river improvement. About $11,000,000 have been devoted to New York harbor, not including $5,255,700 used upon the East river and Hell Gate and $1,555,000 spent on the Harlem river. These three appropriations, which do not include all the money actually used in improving the port of Greater New York, amount to $17,810,400. For the construction of the breakwater and harbor of refuge at the mouth of the Delaware, $5,072,688 have been spent. In addition to this, the Delaware improvements to date, as stated above, have cost $9,665,841.

The improvements made in Virginia have been mainly upon the James river and Norfolk harbor, to which two objects $4,811,782 have been given. Two-thirds of the amount received by North Carolina has been spent upon the Cape Fear river and the Northeast branch. Over one-half of the money used in South Carolina has been devoted to Charleston harbor, which has cost $4,800,200. Over four-fifths of the appropriations received for the harbors and ports of Georgia has been used in dredging the Savannah river and harbor. The larger part of Florida's Atlantic coast appropriations has been spent upon the St. Johns river, for the purpose of giving Jacksonville ready access to the sea. Of the numerous ports of Florida, Pensacola harbor has received the greatest amount. The appropriations made for the improvement of the Alabama harbors and waterways have been used mainly in Mobile bay and harbor and in improving the Black Warrior, Warrior, and Tombigbee rivers. The improvements at Mobile have cost $5,316,631, and the expenditure to date upon the Black Warrior, Warrior, and Tombigbee rivers is $4,764,162. In the case of all of these improvements the appropriations have been made mainly since 1890.

Of the relatively small total appropriation made to improve the harbors of the state of Mississippi, over one-half has been required for the Pascagoula river and Horn Island harbor. In the case of Louisiana, 83.1 per cent of the total appropriations was devoted to improving the delta and passes of the Mississippi river. About 45.3 per cent of the appropriations for the Texas harbors has been given to Galveston, but nearly $4,000,000 have been spent upon Sabine pass, and $1,296,250 have been required by the Aransas pass and bay.

CONCLUSION.

The figures presented in this section show clearly that the American coastwise marine on the Atlantic and the Gulf of Mexico has made large progress since the census of 1889 was taken. In the service performed, both in the transportation of passengers and in the movement of freight, large gains have been made. This progress is certain to continue and there are evidences that the future growth will be more rapid than

the past has been. Until recent years most of the American coastwise traffic has been handled by sailing vessels, mainly schooners. Although this type of craft has been highly efficient, it is much inferior to the modern steamer as a carrier of passengers and freight. The steamer is being substituted for the sailing vessel, because of the increasing importance put upon the movement of traffic in accordance with definite time schedules. Modern business organization places an increasing value upon time. This is true not only for the passenger and package freight services but also for the movement of bulk cargo, such as lumber and coal. Nearly all of the heavy coal traffic now moved from Norfolk and Philadelphia to New York and New England ports is handled in barges, towed by powerful ocean-going tugs, each tug taking two or three barges.

The rapidity with which the steamer and the barge are taking over the coastwise traffic is illustrated by Mr. William Barclay Parsons in a paper recently published.[1] He states that "in 1902 there arrived in Boston from domestic ports south of Cape Cod 1,033 steamers, 1,209 sailing vessels, 909 tugs, and 1,879 barges; total, 5,030. In 1906, four years later, there were 1,148 steamers, 900 sailing vessels, 1,166 tugs, and 2,458 barges; total, 5,672. The aggregate vessel tonnage of the former year was a little over 5,000,000 tons, and of the latter nearly 7,000,000 tons." These figures show a decrease in the sailing vessels of 25.6 per cent and an increase in barges of 30.8 per cent. There was a relatively small increase in the number of steamers, but the increase in steam tonnage was much larger than the gain in the number of ships would show. In 1902 the total of all entrances at Boston, including both coastwise and foreign traffic, was divided among four classes of vessels as follows: Steamers, 20.5 per cent; sailing vessels, 24 per cent; tugs, 18.1 per cent; and barges, 37.4 per cent. In 1906 the percentages were: Steamers, 20.2; sailing vessels, 15.9; tugs, 20.6; and barges, 43.3. Thus during this period of four years the percentages of sailing vessels declined from 24 to 15.9, while the proportion of barges rose from 37.4 per cent to 43.3 per cent of the total. It is not to be inferred from this statement that the sailing vessel may be expected to disappear from the American merchant marine; it will be used with profit in minor traffic services for a long time to come—possibly it will always be the most economical carrier for some kinds of traffic.

The growing volume of coastwise traffic, the steady substitution of steamers for sailing vessels, and the annual congestion of rail traffic during the autumn months of the year have brought about a strong agitation for the further improvement of the harbors of the Atlantic coast and the Gulf of Mexico and for their connection, as far as practicable, by a chain of inland waterways which will reduce the distance between ports and lessen the risk of loss of life and property incurred in navigating the open sea. The passage from New York to Boston and that around Cape Hatteras are especially dangerous, and annually heavy sacrifices of ships and human lives are made. Humanitarian motives, military reasons, and commercial advantages unite in emphasizing the importance of increasing the safety and facility of the coastwise traffic of the Atlantic and Gulf coasts. So far as it is technically possible and financially practicable, the improvement of these facilities may be expected to accompany the progress of American industry and commerce.

[1] Paper on "Cape Cod Canal," in volume on American Waterways. This volume constitutes the Annals of the American Academy of Political and Social Science, January, 1908, Vol. XXXI, page 90.

TABLE 45.—ALL VESSELS, BY CLASS,

	CLASS, OCCUPATION, AND OWNERSHIP.	Number of vessels.	TONNAGE.		RIGGED.				HORSEPOWER OF ENGINES.		
			Gross.	Net.	Screw.	Side wheel.	Stern wheel.	All other.	Steam.	Gasoline.	All other.
1	Aggregate	20,032	4,851,421	4,186,451	4,858	370	183	2	1,712,382	45,932	64
2	Steam	5,413	1,457,894	972,320	4,858	370	183	2	1,712,382	45,932	64
3	Freight and passenger	1,523	1,045,811	704,560	1,225	194	104	.....	992,963	10,214	.....
4	Tugs and other towing vessels	1,690	148,992	90,021	1,606	11	73	.....	381,051	1,506	.....
5	Ferryboats	270	162,834	113,531	111	156	1	2	158,140	195	.....
6	Yachts	1,577	70,461	45,228	1,573	1	3	.....	142,203	30,706	56
7	All other	353	29,796	18,980	343	8	2	.....	38,025	3,311	8
8	Individual	2,625	130,963	86,571	2,531	25	68	1	221,280	37,490	56
9	Freight and passenger	492	37,838	27,390	439	15	38	.....	28,994	5,784	.....
10	Tugs and other towing vessels	455	20,236	12,075	426	2	27	.....	51,539	854	.....
11	Ferryboats	25	1,874	1,344	17	6	1	1	2,557	46	.....
12	Yachts	1,463	67,540	43,120	1,461	.....	2	.....	135,951	28,591	56
13	All other	190	3,475	2,642	188	2	.....	.....	2,239	2,215	.....
14	Firm	560	48,015	30,402	542	12	25	1	75,146	3,866	.....
15	Freight and passenger	170	27,528	18,055	145	10	15	.....	20,967	1,827	.....
16	Tugs and other towing vessels	300	17,407	10,109	291	.....	9	.....	48,237	245	.....
17	Ferryboats	4	199	134	2	1	.....	1	180	12	.....
18	Yachts	74	1,717	1,267	74	.....	.....	.....	4,937	1,468	.....
19	All other	32	1,164	837	30	1	1	.....	825	314	.....
20	Incorporated company	2,072	1,244,283	832,971	1,668	315	89	.....	1,354,536	4,221	8
21	Freight and passenger	845	977,868	657,452	628	167	50	.....	938,305	2,583	.....
22	Tugs and other towing vessels	911	107,183	65,061	867	7	37	.....	267,805	407	.....
23	Ferryboats	216	141,424	99,238	78	138	.....	.....	129,890	137	.....
24	Yachts	36	1,133	800	34	1	1	.....	1,090	614	.....
25	All other	64	16,675	10,420	61	2	1	.....	17,446	480	8
26	Miscellaneous	136	34,633	22,376	117	18	1	.....	61,420	355	.....
27	Freight and passenger	16	2,577	1,663	13	2	1	.....	4,697	20	.....
28	Tugs and other towing vessels	24	4,166	2,776	22	2	.....	.....	13,470	.....	.....
29	Ferryboats	25	19,337	12,815	14	11	.....	.....	25,513	.....	.....
30	Yachts	4	71	41	4	.....	.....	.....	225	33	.....
31	All other	67	8,482	5,081	64	3	.....	.....	17,515	302	.....
32	Sail	5,920	1,132,905	1,012,197	.....	.....	.....	.....	.....	.....	.....
33	Freight and passenger	4,227	1,105,901	987,398	.....	.....	.....	.....	.....	.....	.....
34	Yachts	1,358	21,046	19,317	.....	.....	.....	.....	.....	.....	.....
35	All other	335	5,958	5,482	.....	.....	.....	.....	.....	.....	.....
36	Individual	4,091	338,536	298,495	.....	.....	.....	.....	.....	.....	.....
37	Freight and passenger	2,552	315,669	277,501	.....	.....	.....	.....	.....	.....	.....
38	Yachts	1,269	20,038	18,367	.....	.....	.....	.....	.....	.....	.....
39	All other	270	2,829	2,627	.....	.....	.....	.....	.....	.....	.....
40	Firm	1,189	349,135	308,791	.....	.....	.....	.....	.....	.....	.....
41	Freight and passenger	1,082	347,648	307,450	.....	.....	.....	.....	.....	.....	.....
42	Yachts	75	754	704	.....	.....	.....	.....	.....	.....	.....
43	All other	32	733	637	.....	.....	.....	.....	.....	.....	.....
44	Incorporated company	558	399,761	363,782	.....	.....	.....	.....	.....	.....	.....
45	Freight and passenger	542	398,702	362,807	.....	.....	.....	.....	.....	.....	.....
46	Yachts	8	150	149	.....	.....	.....	.....	.....	.....	.....
47	All other	8	909	826	.....	.....	.....	.....	.....	.....	.....
48	Miscellaneous	82	45,473	41,129	.....	.....	.....	.....	.....	.....	.....
49	Freight and passenger	51	43,882	39,640	.....	.....	.....	.....	.....	.....	.....
50	Yachts	6	104	97	.....	.....	.....	.....	.....	.....	.....
51	All other	25	1,487	1,392	.....	.....	.....	.....	.....	.....	.....
52	Unrigged	8,699	2,260,622	2,201,934	.....	.....	.....	.....	.....	.....	.....
53	Canal boats	663	103,877	101,195	.....	.....	.....	.....	.....	.....	.....
54	All other	8,036	2,156,745	2,100,739	.....	.....	.....	.....	.....	.....	.....
55	Individual	1,801	374,565	367,606	.....	.....	.....	.....	.....	.....	.....
56	Canal boats	311	46,040	45,053	.....	.....	.....	.....	.....	.....	.....
57	All other	1,490	328,525	322,553	.....	.....	.....	.....	.....	.....	.....
58	Firm	1,080	268,855	261,601	.....	.....	.....	.....	.....	.....	.....
59	Canal boats	33	4,960	4,906	.....	.....	.....	.....	.....	.....	.....
60	All other	1,047	263,895	256,695	.....	.....	.....	.....	.....	.....	.....
61	Incorporated company	5,711	1,602,171	1,557,705	.....	.....	.....	.....	.....	.....	.....
62	Canal boats	319	52,877	51,236	.....	.....	.....	.....	.....	.....	.....
63	All other	5,392	1,549,294	1,506,469	.....	.....	.....	.....	.....	.....	.....
64	Miscellaneous	107	15,031	15,022	.....	.....	.....	.....	.....	.....	.....
65	Canal boats	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
66	All other	107	15,031	15,022	.....	.....	.....	.....	.....	.....	.....

OCCUPATION, AND OWNERSHIP: 1906.

CONSTRUCTION.				Value of vessels.	INCOME.			Number of employees.	Wages.	Number of passengers carried.	Freight carried (net tons).	
Iron.	Steel.	Wood.	Composite.		Freight.	Passengers.	All other.					
414	734	18,827	57	$273,105,915	$83,890,161	$25,643,332	$50,226,431	77,124	$38,352,259	292,555,416	65,360,958	1
385	608	4,388	32	193,926,327	57,803,325	25,601,845	32,039,317	45,388	24,433,617	292,292,820	19,340,893	2
156	239	1,123	5	121,136,485	48,644,095	18,185,239	5,418,472	25,177	11,773,117	19,508,104	19,109,272	3
140	183	1,363	4	25,894,551	9,152,820	29,693	21,272,061	11,276	7,528,564	188,046	222,540	4
61	66	143	.....	19,970,466	.....	7,386,913	3,184,621	2,388	2,098,540	272,596,670	.....	5
9	98	1,449	21	21,290,339	.....	.....	16,040	5,088	2,016,936	.....	.....	6
19	22	310	2	5,634,486	6,410	.....	2,148,123	1,459	1,016,460	.....	9,081	7
37	121	2,446	21	27,444,680	1,663,148	647,556	3,622,365	9,732	4,305,969	3,945,453	1,177,705	8
8	7	477	.....	2,958,232	1,530,518	477,689	291,367	2,238	860,988	1,637,188	1,166,646	9
19	16	420	.....	3,162,964	131,220	5,830	3,046,947	2,198	1,345,830	16,698	6,178	10
1	2	22	.....	232,450	.....	164,037	28,234	81	41,515	2,291,567	.....	11
9	96	1,338	20	20,628,509	.....	.....	14,935	4,921	1,959,421	.....	.....	12
.....	.....	189	1	462,525	1,410	.....	240,882	294	98,215	.....	4,881	13
25	21	533	1	4,588,052	1,260,186	121,250	4,071,578	2,726	1,663,160	1,984,184	578,752	14
7	7	156	.....	1,431,524	828,734	102,359	183,425	835	358,952	1,142,406	575,533	15
18	12	270	.....	2,549,525	431,452	2,616	3,735,188	1,690	1,165,863	4,178	3,219	16
.....	.....	4	.....	30,900	.....	16,275	5,800	14	8,143	837,600	.....	17
.....	2	71	1	469,380	.....	.....	985	79	29,277	.....	.....	18
.....	.....	32	.....	106,723	.....	.....	146,180	108	100,925	.....	.....	19
301	440	1,322	9	155,819,420	54,869,075	24,170,421	23,688,955	31,919	17,375,127	266,162,614	17,575,890	20
140	224	476	5	116,387,729	46,273,927	17,563,353	4,881,289	21,979	10,453,658	16,311,396	17,358,547	21
100	148	659	4	19,233,812	8,590,148	21,247	14,249,553	7,245	4,894,544	167,170	213,143	22
56	58	102	.....	17,240,669	.....	6,585,821	2,887,415	2,029	1,615,853	249,653,448	.....	23
.....	.....	36	.....	170,750	.....	.....	.....	80	25,148	.....	.....	24
5	10	49	.....	2,786,460	5,000	.....	1,679,398	586	355,924	.....	4,209	25
22	26	87	1	6,074,175	10,916	662,618	656,419	1,011	1,099,361	20,201,169	8,546	26
1	1	14	.....	359,000	10,916	41,838	62,391	125	69,519	417,114	8,546	27
3	7	14	.....	948,250	.....	.....	249,073	143	122,327	.....	.....	28
4	6	15	.....	2,466,447	.....	620,780	263,172	264	433,029	19,784,055	.....	29
.....	.....	4	.....	21,700	.....	.....	120	8	3,090	.....	.....	30
14	12	40	1	2,278,778	.....	.....	81,663	471	461,396	.....	.....	31
24	52	5,820	24	37,520,903	19,542,231	24,926	474,858	18,654	6,687,314	22,128	18,637,842	32
22	35	4,168	2	33,213,849	19,541,366	23,126	284,690	16,374	6,016,394	20,688	18,630,901	33
2	17	1,317	22	3,775,743	.....	.....	2,681	1,535	524,374	.....	.....	34
.....	.....	335	.....	531,311	865	1,800	157,457	445	146,546	1,440	6,941	35
6	18	4,044	23	13,245,424	6,613,206	23,156	362,668	9,775	2,888,624	29,083	5,232,701	36
4	1	2,545	2	9,342,066	6,612,406	21,356	208,798	7,771	2,324,841	18,643	5,225,815	37
2	17	1,229	21	3,656,627	.....	.....	1,231	1,770	510,648	.....	.....	38
.....	.....	270	.....	246,731	800	1,800	152,639	234	53,135	1,440	6,886	39
4	1	1,183	1	10,437,943	7,006,244	1,770	63,426	5,258	2,135,143	2,045	5,051,644	40
4	1	1,077	.....	10,292,227	7,006,179	1,770	38,360	5,167	2,114,265	2,045	5,051,589	41
.....	.....	74	1	99,016	.....	.....	1,450	42	8,735	.....	.....	42
.....	.....	32	.....	46,700	65	.....	23,616	49	12,143	.....	55	43
13	26	519	.....	12,110,296	5,040,502	.....	38,630	2,975	1,397,248	.....	8,056,034	44
13	26	503	.....	12,022,396	5,040,502	.....	37,532	2,924	1,377,142	.....	8,056,034	45
.....	.....	8	.....	13,000	.....	.....	.....	11	3,956	.....	.....	46
.....	.....	8	.....	74,900	.....	.....	1,098	40	16,150	.....	.....	47
1	7	74	.....	1,727,240	882,279	.....	10,134	646	266,299	.....	297,463	48
1	7	43	.....	1,557,160	882,279	.....	.....	512	200,146	.....	297,463	49
.....	.....	6	.....	7,100	.....	.....	.....	12	1,035	.....	.....	50
.....	.....	25	.....	162,980	.....	.....	10,134	122	65,118	.....	.....	51
5	74	8,619	1	41,658,685	6,544,605	16,561	17,712,256	13,082	7,231,328	240,468	27,382,223	52
.....	.....	663	.....	1,112,475	606,427	.....	337,125	652	281,599	.....	1,104,209	53
5	74	7,956	1	40,546,210	5,938,178	16,561	17,375,131	12,430	6,949,729	240,468	26,278,014	54
2	.....	1,798	1	4,767,831	1,528,013	6,300	2,296,367	2,113	991,032	123,650	3,947,210	55
.....	.....	311	.....	451,550	418,494	.....	135,879	320	154,955	.....	582,887	56
2	.....	1,487	1	4,316,281	1,109,519	6,300	2,160,488	1,793	836,077	123,650	3,364,323	57
.....	.....	1,080	.....	4,610,777	1,520,413	.....	1,799,146	1,601	750,978	.....	4,615,268	58
.....	.....	33	.....	46,800	47,873	.....	9,070	34	15,180	.....	118,496	59
.....	.....	1,047	.....	4,563,977	1,472,540	.....	1,790,076	1,567	735,798	.....	4,496,772	60
3	74	5,634	.....	31,587,058	3,496,179	10,261	11,823,380	8,846	4,899,830	116,818	18,819,745	61
.....	.....	319	.....	614,125	140,060	.....	192,176	298	111,464	.....	402,826	62
3	74	5,315	.....	30,972,933	3,356,119	10,261	11,631,204	8,548	4,758,366	116,818	18,416,919	63
.....	.....	107	.....	693,019	.....	.....	1,793,363	522	619,488	.....	.....	64
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	.....	107	.....	693,019	.....	.....	1,793,363	522	619,488	.....	.....	66